AMERICAN VETERINARY REVIEW.

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All communications for publication or in reference thereto should be addressed to Prof. Roscoe R. Bell, Seventh Ave. & Union St., Borough of Brooklyn, New York City.

EDITORIAL.

THE ASSOCIATION SEASON.

The month of September seems to have been settled upon as the time for holding the annual meetings of the large veterinary associations. This has become the custom, not by coincidence, but from an accumulation of experience, which has taught us that at this season veterinarians can more easily and are more willing to relinquish their practical professional duties for a brief period than at any other time of the year. The majority of practitioners are located in the cities, and a large proportion of their *clientèle* are still lingering at mountain or seaside resorts; the heated term is waning, with its attendant emergency cases; the local tradesmen are still intoxicated by the lethargy of summer stagnation; the green horse, with his acclimating ills, has not yet left his country home; and all thoughts are of a respite from labor in anticipation of a brisk fall demand upon the energies of the veterinarian. He feels worn and languid from the long year's work, and appreciates the possibility that congenial recreation away from the cares of practice will better prepare him for the activities of the approaching season. Thus it is that in the first week of September we find veterinarians hurrying off in various directions—some to the national, others to State or local gatherings; while again others, having friends in distant States, will avail themselves of the dual privilege of performing a social function and of attending the meeting of an association in a sister State.

But wherever their footsteps may lead them they are sure to receive a cordial welcome; and to return refreshed, enlightened, and made better in every sense by the needed rest and increased knowledge.

Since the September number of this journal was issued the four largest associations in this country have been in session, all of which report increased attendances and absorbing interest in the proceedings. In the second week of September the American Association held a most important and successful four-days meeting in Detroit, Mich.; the following week witnessed the two large State conventions of New York and New Jersey, which were followed by that of that sterling organization, the State Association of Pennsylvania, to say nothing of many minor assemblages of local interest.

The REVIEW is enabled this month to tell the story of the first two meetings, and trusts to give the details of the others in its next issue.

ANTISEPTIC VETERINARY SURGERY.

The spirit of antisepsis dominates every other consideration in modern veterinary surgery. Its principles have long been recognized and acknowledged to be based upon demonstrated truths, even though its application has been thought by many to be impractical in the surgical treatment of the lower animals. The American veterinarian could not long permit his ingenuity to lie under such a stigma, however, and ways and means have been found to adapt the true principles of antisepsy to a large proportion of the operations which he is called upon to perform, and with as much regard to detail as is exercised by the surgeons of human medicine, and with results which, considering the obstacles encountered, will not suffer by comparison. Our literature is teeming with articles upon this subject, most of them having for their object the practical application of the principles of antisepsis, and from these foundation stones there will gradually be built the completed structure. While we are not devoid of text-books upon this subject, they teach more the

principles than the practice, and the only channel through which the student can keep abreast of the kaleidoscopic transformation that is daily unfolding, is the pages of contemporaneous literature. He who would be of the modern, up-to-the-hour class of veterenarians must read the professional periodicals, and read them between the lines. The "Department of Surgery" in the REVIEW is contributing to the general fund of knowledge on this subject probably as much as any other source, and we commend the work which the Drs. Merillat are doing as of the highest order, being performed with that regard for detail and precision which should characterize all such productions. From many sources are contributed individual articles bearing upon different phases of the subject, and all having their value as bearing upon the whole question. At the recent meetings of the American and the New York State Veterinary Medical Associations the subject received the greatest consideration, both in the literary programmes and in the clinical demonstrations. Upon all sides there seems to be a thirst for improved methods of surgery, and with anæsthetics and antiseptics we are safe in stating that the veterinary surgeons of to-day are the peers of those of our sister profession.

DR. A. YOUNGBERG, Lake Park, Minn., will shortly contribute to the REVIEW the details of his remarkable success with the Schmidt treatment for parturient paresis. At the Detroit meeting he informed us that out of 80 cases treated all were saved but 2—the most wonderful record we have yet heard of from the use of the iodide of potassium. There are certain rules which he adheres to in the technique of the treatment, and at our solicitation he has consented to place them before the profession.

ATLANTIC CITY, N. J., is being strongly put forward for the meeting of the American Veterinary Medical Association of 1901. Both the New Jersey and Pennsylvania State Associations, at their annual meetings last month, passed unan-

imous resolutions inviting the National Association to come to Atlantic City, putting forth the advantages offered, the fact that New Jersey has never been honored by its presence, and that the Pan-American Exposition at Buffalo will insure reduced transportation.

THE VETERINARY MEDICAL ASSOCIATION OF NEW JERSEY is taking hold of the Army Bill in earnest, having appointed a number of delegates in every congressional district to further its interests with the representatives.

ORIGINAL ARTICLES.

SPAVIN: ITS ETIOLOGY AND TREATMENT.

BY W. J. MARTIN, M. D. C., KANKAKEE, ILL.

Read before the American Veterinary Medical Association, Sept. 5, 1900.

Etymology of the Word Spavin.—Old French, *Esparvain;* New French, *Esparvin;* Spanish, *Esparavan;* Italian, *Spavenio* and *Spavento.* From Old French, *Espervien;* Old High German, *Sparwari*, a sparrow hawk, so named from the peculiar gait of a horse lame from this disease, and which makes a horse lame from this disease raise the lame leg like a sparrow-hawk.—*Webster's Dictionary and the Standard Dictionary.*

Definition.—Spavin is an inflammatory ostitis affecting the component structure of the bones and also of the ligamentous tissues that compose the equine tarsus, and which sooner or later (in the majority of cases at least) produces ossific ostosis and anchylosis of two or more bones of the articulation. This anchylosis may be partial or complete. The ostitis and accompanying exostosis usually first appears at the inner angle of the cuneiform magnum and the articular facets of the parvum and the inferior surface of the scaphoid bones; though quite frequently the disease involves the articulating surfaces of the scaphoid, inferior surface of the astragulus and cuboid bones.

Another though less common seat of the disease is the surfaces of articulation between the astragulus and os calcis, and in this location the disease usually partakes of the nature of a true form of osteoarthritis, and often terminates in caries and necrosive ulceration within the joint.

Pathology.—The inflammation occurring in spavin may be considered of two distinct forms, namely: acute and chronic. The disease may arise from two causes, namely: Idiopathic and traumatic. Under the first head may be included all hereditary predispositions to osseous exostosis, due primarily to defective anatomical construction of the skeletal framework, the usual result of which is endositis, periostitis and osseous exostosis of the bones of the articulation. Under the second head we include all external agencies that directly or indirectly cause the disease, such as concussion, severe strain or stretching of the ligaments of the joint, more especially the interosseous ones; injuries, such as kicks, wounds, etc.; though in my experience spavin is rarely due to injuries of a direct nature, though an injury may be the indirect cause of spavin, as where the opposite limb has been injured and the animal in favoring it throws the entire weight of the posterior part of the body upon the sound limb, which in time may become affected with spavin.

The question is often asked, Why does spavin most generally appear at the junction of the cuneiform magnum and parvum? In viewing a tarsus in profile, we notice that the bones of the joint do not rest upon a plane surface, but incline gradually from the external part of the joint to its internal portion; we also note a greater development of the bones composing the external part of the tarsus than those of the internal portion. This removes slightly the line of gravity from the central part of the joint towards its inner part, and as a result the line of weight descending from the tibia to the surface of the astragulus is thrown in an oblique manner mostly upon the inner portion of that bone, and is in turn transmitted to the inner part of the scaphoid, cuneiform magnum, and parvum. The parvum

being the slightest constructed bone in the joint, naturally is the first to become the seat of inflammation from the unequal distribution of weight.

The divergent views held by some of the most eminent members of the profession in regard to the pathology of spavin, renders the subject a most difficult one for the general practitioner to approach, or even to venture an opinion on. Some hold that it is the ligaments of the joint in every case that are first to become the seat of the inflammatory action, and from them it next extends to the substance of the bones. Others claim that the disease invariably originates in a strain of the inner tendon of the flexor metatarsi muscle ; while others claim, among them being the distinguished Dieckerhoff, that the inflammation is first set up in the sheath of the tendon of the flexor metatarsi muscle, though why inflammation of this sheath should cause spavin, when it rarely causes even slight lameness, appears strange to me. Our own opinion is that spavin is nothing more nor less than an ostitis of the bones of the hock joint ; the ostitis may originate within the cancellated structure of the bone (endositis) or on the external surface of the bone (periostitis). Endositis is the form present in idio pathic spavin, while the periostitic form is due to traumatic causes, as strain of the ligamentous structure of the joint, from concussion, etc.

In endositic inflammation of the bones of the tarsus the delicate membrane lining the Haversian canals becomes highly congested and inflamed ; this inflammation in time spreads from within outwards, and affects the space between the compact bones and the periosteum. As the articular cartilage of a joint may, for all practical purposes, be considered a continuation of the periosteum, it can be readily seen how endositis may rapidly spread throughout an articulation. One important fact in connection with the pathology of spavin or other forms of bone disease should be borne in mind, and that is, "that it is in the soft parts of bone, the periosteum, the medullary membranes, and the delicate connective tissues which pervade the

Haversian canals and cancelli, that the inflammation occurs, and that the pathological process, though somewhat modified by the hard and resisting nature of the osseous framework, is essentially similar to that which occurs in the soft tissues."

In the endositic form of spavin, as the inflammation advances the peripheral lamellæ and the articular cartilage become involved in the destructive metamorphosis, in which the canaliculi of the opposing bones are laid bare by the constant friction and irritation, thus establishing a vascular communication between the Haversian canals and lacunæ of the bones. These vascular openings pour out an effusion of bone-forming lymph, which in time firmly cements the diseased bones together. We see this condition finely illustrated in the specimen before you, in which it will be seen that the scaphoid, cuneiform magnum and parvum are firmly cemented together without there being the slightest periostitic enlargement on the external borders of the bones.

In the periostitic form of spavin the inflammation advances from the periphery of the bones to their centre, and, as before mentioned, is usually due to external influences, such as strain of the interosseous ligaments, articular arthritis, violent overcontraction of muscles or tendons implanted in the periosteum of the bones. "The pathological changes in circumscribed periostitis consists of an inflammatory transudation into both the superficial and the deeper strata of the membrane, forming an enlargement sometimes termed a 'node.' This transudation consists of fibrous lymph and leucocytes, which serve to form a prominence over the surface of the bone."—Agnew. This inflammatory node in the horse, when affecting the bones of the tarsus, constitutes the osseous exostosis termed spavin.

Etiology.—Spavin is a disease due to domestication. It is rarely seen among equidæ living in a state of nature. The horses that live on the plains and in the valleys of the Rocky Mountain regions of the United States, Canada and Mexico are rarely affected with spavin. I am reliably informed that among

horses running wild on the pampas of South America it is a very rare sight to see one affected with spavin.

During the several years in which I have been engaged in the study of the osteology of fossil equidæ I have examined the hock bones of fossil horses from nearly all parts of the world without being able to discover any trace of a disease among them similar to spavin in the domestic horse. It is true that these fossil horses are of a distinct genera to that of the domestic species, yet the bones of the hock are almost identical with those of the domestic animal. More especially is this true of Hipparion.

From a close study of the pathology of spavin it will be seen that it often becomes a difficult matter to ascertain the true cause of spavin. In the idiopathic form, heredity undoubtedly plays an important part, because there is probably no domestic animal so prone to morbid ossific enlargements as the horse. In my opinion the most common cause of spavin is a defective anatomical conformation of the bones of the entire limb as well as those of the tarsus, and in tracing the cause of spavin lameness we should view the limb as a whole rather than at any one point. We should note the formation of the muscles of the limb, the manner in which they perform their functions, as well as their relation to the bones of the limb. In a word, take a generalized view of the whole mechanical construction of the diseased leg.

In examining a hock affected with spavin, we notice in the majority of cases a peculiar rounded form of the superior head of the large metatarsal bone; this is anomalous, and gives to the scaphoid and cuneiform bones the appearance of being top-heavy. We almost invariably find such joints the seat of spavin. In the bent or "sickle hock," the powerful action of the extensor muscles of the limb, when the animal is subjected to hard and fast work, will, by the great pressure and contraction on the articulating surfaces of the bones and ligaments, excite ostitic inflammation. Some pathologists claim that spavin is due to incomplete formation of the bones of the hock,

and hence should be viewed as simply a neoformation of bone to complete the bone-forming process.

It is claimed by some German authors that large horses, with powerfully developed muscles of the hind quarters, are, from the powerful mechanical action of flexion and extension of the limb on the hock, much predisposed to spavin, also that long, weak-backed animals are often affected with the disease. I have often seen spavin occur in mares that had passed through a severe attack of parturient laminitis, in which the major portion of the weight of the body was thrown upon the posterior part of the body. In this affection, articular arthritis is a common sequel and often ends in ostitis and anchylosis.

Semiology.—Mr. Percivall, in speaking of the symptoms of spavin, says: "The symptoms of spavin are, in general, plain and simple and unequivocal." With all due deference to such a distinguished author, I must say that in my experience, where the exostosis is not yet present, spavin is one of the most difficult forms of lameness to properly diagnose. There is, perhaps, no other form of lameness of the horse in which the practitioner should be more guarded in his opinion, moreover, the young and inexperienced one.

The idea that certain characteristic movements of the hock joint are always indicative of spavin lameness is in a great many cases erroneous. A much more certain sign of spavin lameness would, in my opinion, be the wearing away of the toe of the shoe or hoof, as this condition is almost invariably present in cases of spavin lameness, where the exostosis is not present and the ostitis is not extensive; being confined to the inner angle of the scaphoid and the cuneiform bones, the diagnosis can be made certain only by inference, such as the history of a slight lameness, which would disappear after a certain amount of exercise had been taken. The absence of any pathological lesion around the foot, such as sidebones, ringbone, tendonitis, curb, patellar lameness (gonitis chronica), hip-joint disease, or long standing lameness with atrophy of the gluteal and patellar muscles from repeated attacks of azoturia, etc. All these conditions

should be taken into consideration by the practitioner. The so-called "spavin test," in which the lame limb is strongly flexed and immediately after the animal is made to trot briskly, is, in my opinion, nearly worthless for diagnostic purposes. I have seen this applied to horses that were perfectly sound, and yet they would move off quite stiffly for a short distance, and markedly so if aged. Atrophied muscles in the patellar and gluteal regions are rarely due to true bone spavin, this condition being most often seen in cases affected with rheumatoid arthritis of the hock and with gonitis chronica of the patella.

A horse suspected of spavin lameness should, if possible, be seen by the practitioner at rest in the stable; it will there be observed that the animal will flex the suspected limb much more than its fellow. This is done in a peculiar manner; the point of the toe is carried outward, and the heel of the foot, owing to the action of the abductor and the adductor muscles of the limb, will be rested upon the upper part of the opposite hoof. At this time, if the animal is made to move quickly over in the stall on the sound limb, the movement will be accomplished with a sort of hopping action, and the lameness is quite marked as a rule. The animal moves with much more facility when made to move towards the lame leg.

When the animal is trotted to halter the lameness is marked by a spasmodic or convulsive contraction and flexion on the hock joint and a rising and falling of the hip of the lame side. The limb when first placed upon the ground will rest upon the toe; but as the exercise is increased the animal will gradually place more and more of the foot upon the ground, until he is able to place the entire weight upon the heels. During this movement the leg, when carried in extension, does not move through the full segment of its circle of extension and flexion as in a healthy joint. This conditional movement is most marked just prior to the appearance of the exostosis.

Ocular Inspection and Palpation.—In order to better observe the presence of an exostosis upon a suspected joint, have the animal placed upon a level footing and with both limbs as

nearly together as possible ; stand several yards in front of the animal, and looking through the front legs, compare the outline of each joint with that of the opposite one ; carefully note any irregularities of the lame joint, and compare them closely with the bones of the sound one. Then step to one side, nearly on a line with the shoulder of the sound side, and *vice versa*, when any enlargement on the surface of the lame leg can readily be detected. Palpation for spavin between the scaphoid and the cuneiform bones of the joint and when the exostosis is not well marked, is of very little value. When the ostitis is confined to the articulating facets of the astragulus and os calcis, palpation by the trained and sensitive fingers of the surgeon will readily detect any existing inflammation in the parts.

The question is often asked, how long a period of time will elapse from the beginning of spavin lameness until the exostosis will become visible. In some rare instances but a few weeks will intervene before the exostosis is well developed, though in my experience this is an exception and not the rule. In most of the cases coming under my observation the lameness may exist for several months, and I recall one case in particular in which there was persistent lameness for three years before the exostosis made its appearance.

In pronouncing a horse spavined in which there is no visible exostosis present, we are often met by the assertion of interested parties, that if the horse has a spavin coming on the lame leg, he must certainly have one on the well leg, as both joints are exactly alike. I wish to state, more especially for the benefit of the young practitioner, that in horses with coarse hocks and in which there is an undue prominence of the borders of the scaphoid and cuneiform bones, and even if there is not the slightest lameness, he can in nearly every case safely make the statement that such a hock is already affected with spavin. It is rare in my experience to find an animal affected with spavins on both hocks to be lame in more than one joint at a time. Anchylosis of the bones of the hock without lameness is by no means confined to adult animals ; I have seen well marked ex-

ostosis and anchylosis of the scaphoid and cuneiform bones in a colt but a few days old. This diseased condition can be accounted for in no other manner than that the diseased state must have taken place during the intra-uterine period of its existence.

Treatment.—The treatment of spavin has varied but little from the fundamental methods laid down by Youatt and Percivall; and that this method was based upon a correct scientific knowledge of the pathology of the disease is borne out by the experience of nearly every practitioner from their time to the present. The most essential requirement in the treatment of spavin as well as in all other joint diseases is rest. By rest I do not mean the turning of the animal out in a pasture, where by running and jumping in play the animal has every facility for keeping the diseased bones in a state of constant irritation. If a small box stall with a ground floor is not available, I have the animal placed in an ordinary single stall; bring the feet into proper shape by levelling and proper shoeing. There is no particular pattern of shoe required for this purpose beyond that which will place the bones of the joint upon an even surface.

In the early stage of the disease, if there is severe inflammatory action present, applications of hot or cold water may be made to the joint, though usually I consider this a waste of valuable time, because the majority of the cases met with have already passed through the acute stage. It is an incontrovertible fact that horses in country districts are much more easily treated and cured of spavin than are horses in cities; also, that the exostosis is much smaller in the former than in the latter.

The question is often asked, Should we make any distinction in the choice of a therapeutic agent when treating ostitis or periostitis existing in a hock joint? I should answer no. While articular arthritis existing between the astragulus and os calcis is a much more severe disease than where the disease is confined to the border of the cuneiform bones, yet the therapeutic agent that will relieve the one will answer for the other equally well.

What form of therapeutic agents are the most efficacious in combatting spavin? We answer, the chemical ones, such as mercury, iodine, and the mineral acids, etc. Cantharides, which occupies a prominent place in many of our text-books for the treatment of spavin, is, in my opinion, of very little value for this purpose.

Our object in applying chemical agents to a joint affected with spavin is, as every practitioner knows, not with the object of removing the osseous exostosis, but merely to assist nature in hastening the process of anchylosis; because a joint once the seat of inflammatory ostitis can never be restored to its pristine condition.

Of the above mentioned chemicals I prefer the bichloride of mercury in solution, supplemented with camphor and oil of turpentine. The following is the formula: ℞ Hydrarg. chlor. corro., ʒi; sp. vini. rect., ʒvii; hydrochloric acid, ʒi. Mix. Add the acid to the spirit and dissolve the mercury in the mixture, then add sp. vini. rect., ʒxxxvi; gummi camphoræ, ʒiv; olei terebinthinæ, ʒvi. Mix. Dissolve the camphor in the turpentine and then add to the spirit. This fluid is dispensed in six or eight ounce bottles, with instructions to apply a portion to the joint once or twice a day for a period of from two to four weeks if necessary. I have found that this compound has a tendency to quickly relieve the pain of spavin, and, furthermore, it is a much more satisfactory method than that of firing every case in the beginning of the disease, as many cases will recover without blemish under this form of treatment. I find in country districts a considerable prejudice against the use of the hot iron in treating spavins, and in the case of valuable animals the owners will often resort to nearly every other means before resorting to its use. However, I am a firm believer in the efficacy of the hot iron in the treatment of spavin after other remedial agents have failed. The pointed pear-shaped iron is the one preferred by me, and during the operation it is introduced deeply into the exostosis.

Cunean Tenotomy.—In cases in which the exostosis is very

large this operation often proves of much benefit, by lessening the intense pain and irritation of the mechanical pressure of the fibres of the metatarsi muscle over the osseous enlargement. The operation is quite simple and requires but very little attention afterwards.

Tibial Neurectomy.—Resection of the tibial nerve for the cure of spavin has been extensively practiced by European veterinarians with somewhat varying success, and at the present time the operation is not thought to be of much benefit. Prof. Bosi, of the Bologna Veterinary School, has lately recommended a double neurectomy at the hock for the cure of spavin, and it is claimed that 90 per cent. of the cases so operated on have been cured. The operation consists in a resection of the tibial nerve and the peroneal nerve.*

RECENT VETERINARY LITERATURE ON SURGERY.

By M. H. Reynolds, University of Minnesota, Experiment Station, and State Board of Health.

Presented to the Minnesota State Veterinary Medical Association, July 11, 1900.

The following summary of an article by Huber in the *Journal of Physiology* for February, 1900, confirms modern teaching on the subject of regeneration of nerve fibres, and is especially interesting, perhaps, to those who are doing frequent neurectomies: "(1) The motor and sensory nerve endings of voluntary muscle degenerate after severance of the muscular nerves. The motor nerve endings and the extreme distal portion of the motor nerves degenerate earlier than do the sensory nerve endings. (2) The motor and sensory nerve endings in voluntary muscle may, under suitable conditions, regenerate completely. The motor nerve endings regenerate more quickly than the sensory nerve endings. (3) These experiments, it seems to me, show clearly that the regeneration of a degenerated portion of a peripheral nerve is brought about by the down growth of the axis

* See American Veterinary Review for August, 1900.

cylinder of the central, undegenerated portion of the nerve fibre."

The Veterinarian (London, May) contains an interesting article on perforating wounds of the neck with rupture of the pneumogastric and sympathetic nerves. This case is especially interesting as the reported symptoms were referable mainly to the alimentary canal. Certain secondary symptoms appearing later involve the respiration and heart action.

In the same number of this journal is reported a study by Hocke of the way in which the lesions of actinomyces spread. These conclusions may be briefly but rather imperfectly summarized as follows: (1) That there is a constant struggle between the leucocytes and the invading organism. In some cases the leucocytes seems to incorporate within itself filaments of the mycelium, and increase greatly in size. It may be so large that it is unable to reënter the blood stream. If the leucocyte succeeds in destroying the parasite, the leucocyte then returns to the normal dimensions and conditions, but in many cases the leucocytes are not victorious, and then become victims of the parasites which they attempt to destroy. Such leucocyte cells then die, but the actinomyces send out branches and continue to develop, forming new colonies. The leucocyte or white blood cells in this way appear as active agents in spreading the infection. This explains the rather slow invasion of healthy tissue immediately bordering on the seat of original inoculation.

Surgery taught by cinematograph, practically the French name for kinetoscope. Dr. Doyen, Paris, in a French scientific journal discusses his ideas and methods of teaching surgery by the use of these moving pictures, reproducing the operation as actually performed. In this way a very large number of students arepermitted to follow the operation very closely. An actual operation can be performed and then afterwards reviewed and fully discussed by the aid of this instrument. As a rule comparatively few students are able to take actual part in critical operations or even to watch closely the various proceedings. The first illustration of the use of this instrument in teaching

surgery was made before the British Medical Association in 1898. In a French medical college, a course in the study of surgery has been established, to be illustrated by means of this instrument. Students can not only witness the operation in this way, but the operation can be as perfectly reproduced thousands of miles away, and it is possible that American surgeons can save considerable of their time by studying the operating methods in this way at home.

A German surgeon has developed a device which enables the interior of the stomach to be photographed for the purpose of diagnosis. The camera is exceedingly minute and intended to be swallowed by the patient. As soon as it reaches the stomach the walls are illuminated by means of a small electric lamp. The narrow film, 20 inches long, is connected with a cord, the cord to be pulled by the operator. Conducting wires are of course swallowed with the camera and cord.

The June number of the *Journal of Comparative Medicine and Veterinary Archives* publishes a practical article by Dr. Lowe, of New Jersey, detailing actual experiences with median neurectomies.* It is scarcely necessary to call attention to the great importance of this kind of information. Dr. Lowe first gives in detail methods of confining the patient and performing the operation. There is given nothing new in either, but the details are quite carefully described, so that one not familiar with the operation could quite easily follow the various steps as described. I would suggest in criticism that if the incision is made a trifle lower, the nerve is more easily found; in fact, at a somewhat lower point the nerve can in most subjects be clearly defined by sense of touch and the incision made directly upon it. I also prefer to hold the lips of the wound open by a simple retractor made from common rubber bands with a small pin hook at each end. This is self-retaining, no difference how much the horse struggles, and there is no blunt tenaculum or assistant's hand in the operator's way. Dr. Lowe urges a sur

* This article was published in the July REVIEW.—EDITOR.

gically clean operation, followed by cold water irrigation, if weather permits; and with this treatment expects to have complete healing in about two weeks. In this article seven operations are reported with the following results: two cases of ringbone, operations failed to give good results, there being anchylosis and of course some mechanical lameness; one case of navicular disease, successful; four cases of tendonitis, all successful. Dr. Lowe concludes with the suggestion that we should not perform this operation when it is unnecessary—a very good suggestion.

In the same number of this journal Dr. W. T. Campbell reports upon protargol as a new treatment for fistula. This is described as a light yellowish powder, freely soluble in water and a derivative of silver, less irritating than the nitrate. Dr. Campbell reports two cases of fistula of the withers and one quittor treated with this agent. I might suggest in criticism that the results obtained from two cases of fistula cannot be taken as evidence of much importance in estimating the value of a new treatment; but, on the other hand, Dr. Campbell is to be commended for reporting his experience, and if members of this association decide to do any experimenting along this line in the near future, we should all be glad to learn their results at our next meeting.

Dr. L. A. Merillat, in the May number of the AMERICAN VETERINARY REVIEW makes some interesting statements concerning the use of chloroform upon horses. He notes that the time required for reaching surgical anæsthesia is usually stated as from 15 to 40 minutes. Möller gives 7 minutes with 35 grammes of chloroform as his shortest record, and the average among 126 patients varied from 18 to 22 minutes. Commenting upon this, Merillat states that he has never failed to obtain profound anæsthesia in less than three minutes and frequently in 30 seconds. After some discussion and comparison of slow and rapid methods, he concludes that the dangers are scarcely worth mentioning if proper care is taken, and that laboring over a patient for 20 to 40 minutes is at least unnecessary.

A case of collection in maxillary sinuses of a cow is interesting chiefly on account of its rarity. Such a case is reported in the same number of the REVIEW. I have never seen a case of this in cattle practice, and have wondered whether other members of the association had been more fortunate.

Dr. W. Hunting has a very interesting article in the May *Veterinary Journal* (English) on shoulder lameness. He first discusses the indefiniteness of the term. The chief interest and value of his article lie in the thoroughness with which he attempts to upset most of our previous teaching and opinions concerning this peculiar trouble. He cites the various symptoms that have usually been considered diagnostic of shoulder lameness, and in nearly every case points to some other form of lameness which produces the same symptoms. For instance, concerning the good old symptom, circumduction of the leg, he shows that some forms of lameness having seat in the knee or foot occasionally show this symptom. Abduction is discussed as quite common in foot troubles and even to injuries of the pectoral muscles. Motion and manipulation are discussed as deceptive. The author admits the use of these tests, at the same time confessing that he rarely succeeds in getting any satisfactory information by them. Position of the limb at rest is considered very helpful, but on the other hand it utterly fails in many cases to give any useful information.

I presume that most members of this association have read the AMERICAN VETERINARY REVIEW for June, and have thought over Dr. Hannawalt's article on chromic acid. To those who have not I would simply report that the Doctor recommends this agent quite strongly, especially as a caustic in the treatment of such cases as fistula and other chronic sores. He gives some cautions concerning the use of the drug, particularly as to severe action upon the operator's hands. He recommends its cautious use in preparation of .2 per cent. solution or 1:500.

In the same issue of this journal there is quite an article on paraldehide in veterinary practice, taken from a foreign journal.

This drug is ranked by its chemical properties as standing between alcohol and ether. Diluted with water or glycerine, it has a peculiar odor, antiseptic and hypnotic action. The drug is described as not satisfactory for producing deep sleep, but as acting peculiarly on the sensitive nerves—30 grammes, approximately an ounce, given in capsules permitting painless performance of severe operations.

The following notes concerning local anæsthetics are taken mainly from the *Journal of Comparative Pathology and Therapeutics:* Cocaine dissolves rapidly in either hot or cold water, changed chemically by boiling and rendered ineffective. Should usually be made fresh, but when 2 per cent. of carbolic acid is added it keeps fairly well. The immediate local effect occurs from 2 to 5 minutes, about 15 minutes required for anæsthetizing the larger nerves, like the digital or plantar. Anæsthesia lasts from 20 to 30 minutes. Extent of area anæsthetized depends upon the way the circulation is controlled and upon the tissue into which it is injected. Eucaine used alone is slower in action and does not produce as complete anæsthesia, but the effect when once produced lasts much longer. It has the advantage over cocaine in that it may be boiled for sterilization without decomposition. It has the further advantage of being considerably cheaper than cocaine. A mixture of eucaine and cocaine is in some respects preferable to either alone, especially as effect lasts longer. Holocaine has something of an antiseptic action, and like eucaine is not decomposed on boiling. It is not suitable for general use, as it is considered somewhat more dangerous than cocaine. Used chiefly for the eyes; not very commonly used. Orthoform was more recently introduced; seems to be especially valuable for large surfaces of wounds and mucous membranes. Non-poisonous, can be used over large surfaces very safely. The writer has recently commenced the use of chloretone, but is not as yet prepared to express any opinion as to its value.

Dr. E. Merillat gives some interesting surgical "nevers" in the June REVIEW. Several of these appeal to me quite strongly.

For instance: "Never operate without exhausting every possible means of making a correct diagnosis." "Never operate without familiarizing yourself with the operation to be performed." "Never foster dexterity (and speed) at the expense of judicious technique." "Never perform an operation requiring delicate manipulation without the aid of an anæsthetic." To these I would like to add: Never commence an operation until you are ready. I occasionally violate this one myself, but nevertheless I dislike to see a surgeon commence an operation, then chase off first after one instrument and then another, stopping to hunt for bandages or learning for the first time that he has no cocaine or his hypodermic needles are all lost or broken. And I would add one other to this list: Never pick or piece. Make clean, free incisions as long as needed at the first stroke, and do not keep on picking and picking after the operation is practically finished and the horse should be released.

Members of this association who are especially interested in practical disinfection should secure a copy of the Lomb Prize Essay on "Disinfection and Individual Prophylaxis against Infectious Diseases," by Dr. Sternberg. This essay was originally written in 1886 and soon became an accepted authority and guide for practical disinfection. The author has recently made a revision which includes newer antiseptics and newer methods, bringing the whole thing up to date. Copies may be secured by writing H. Lomb, Supt. of Essay Dept., American Public Health Association, Rochester, N. Y.

The fifth series of 100 laparotomies are reported by Dr. Heinricius, quoted in the *St. Paul Medical Journal* for April. This series of 100 laparotomies were followed by four deaths. At least two were inevitable, as shown by post-mortems. I bring this item before a veterinary association for two reasons: 1st, because we should all be interested in problems of comparative medicine; and, 2d, as calling attention to the wonderful strides that have been made in human surgery.

I have been somewhat interested in an article published by the *Medical Record*, April 7, 1900, on "Summary of Cases of

Caricoma and Sarcoma Treated by Cataphoric Sterilization." This process may be briefly described as the diffusion of nascent mercuric salts produced by electrolysis, somewhat similar to the process used by dentists in producing anæsthesia of a very sensitive tooth by means of cocaine and electric current. Of 37 cases reported, 10 are given as cured, uncertain 7, failures 22. Many of these cases are of course necessarily hopeless. Members of the association who are especially interested in this could doubtless secure for perusal a copy of the *Medical Record* from some neighboring physician, as the *Medical Record* is very widely circulated among physicians.

The Veterinarian (English) for June discusses under "Clinical Cases," by Prof. Cadiot, translated by Dr. Dollar, among other things an operation for rupture of perineum. I consider this an operation which could frequently be performed with complete success, and yet one which is very commonly neglected as hopeless or useless. Prof. Cadiot reports operation on a complete rupture of the perineum but which did not involve the rectum. The length of time which had elapsed since the accident had occurred is not given, but it is mentioned that an operation had been attempted by another veterinarian which resulted in failure. It was probably therefore what we might call an old case. From the 19th to the 26th of October the patient was prepared by warm injections of antiseptic solution and had sodium sulphate internally. The surfaces involved in operation were thoroughly washed and then disinfected. The skin and mucous membrane were divided throughout the entire length of the tear, and suitable surfaces were secured for healing by removing a strip of mucous membrane extending to the skin edge. The surfaces were then brought together by a double suture, which is carefully described in the article. Subsequent treatment is described until Nov. 3, at which time union was complete, except the upper part of the wound, where a few of the deep sutures had given way. The upper margin of the wound was again prepared and sutured, the patient being discharged as cured on Dec. 6. I have operated on several of

these cases and all except my first case have been successful. I do not employ the double suture as described by Prof. Cadiot, but merely the old-fashioned quill suture, deeply inserted.

PARTURIENT APOPLEXY.

By Dr. W. A. Thomas, of Nebraska.

A paper read before the Nebraska State Veterinary Association, February, 1900.

This disease or lesion affecting our domestic animals occurs principally in the cow. It has baffled the skill of veterinarians ever since good cows were known, and not infrequently has the owner of one of these most useful animals had his highest hopes suddenly turned to disappointment and grief. He looked with pride on a noble cow, a fine calf, and thought of the possibilities of an abundance of rich milk. He goes out again to look at his prize, and what has happened? She is prostrated and already half unconscious; pays no attention to his approach nor to the calf that plays about the yard. There is no time to lose, the doctor is called and everything possible is done to save the animal, but she gradually sinks and dies and the owner wonders if that doctor "knew anything." That is just where we are standing to-day, wondering if the doctors know anything about parturient apoplexy.

Veterinary literature since the commencement of the century teems with descriptions and discussions relative to the disease and the most eminent veterinary pathologists still appear to be far from unanimous as to its nature. This statement made by Fleming a quarter of a century ago still holds good.

In this vaunted day of science new theories are advanced and new treatments invented to relieve the concomitant conditions of this as yet disputed lesion.

Dr. Schmidt, of Denmark, inaugurated the idea that the trouble originated in the udder and his treatment is to inject a solution of iodide of potassium into the udder through the teats. His paper giving theory, details, treatment, etc., was

translated by Dr. Williams and published in the AMERICAN VETERINARY REVIEW, covering a space of forty pages. The treatment was very soon taken up by veterinarians throughout the United States. Good practitioners have had varied success with the Schmidt treatment, saving according to the figures they have given from 25 to 75 per cent. Dr. Schwarzkopf, who is most enthusiastic for the Schmidt treatment, collected data which he presented in a paper before the American Veterinary Association in New York last September, himself loses two cases out of eight and a third by complications.

The intravenous treatment is comparatively a new one. So far as we can learn the success with this mode is about equal to the Schmidt.

Instrument makers have not been slow in aiding the would-be-up-to-date practitioner, as they are already making and advertising instruments for the new treatments. If the Schmidt theory is correct some one should invent an antitoxin for the purpose of treating the liable subject before parturition and produce immunity from such attack.

At the request of this association, I collected data on this subject. The following list of questions was sent to the members of the profession in this State:

No. 1. Time of taking ill after delivery?

No. 2. What was the treatment?

No. 3. Recovery or death?

No. 4. In case of death, give post-mortem, if any.

No. 5. What is your theory as to the pathology?

I received eleven replies. The replies to question No. 1 varied from time during delivery up to ten days after. The replies to the remaining questions were as follows: Treatment—One used Schmidt, also hypodermic injection of strychnia; tapped the rumen; magnesia sulphate, as cathartic.

Two cases—One recovered that received strychnia. Theory on pathology, nervous intoxication.

Another—" Intravenous injection, hot packs, cauterization, added iodide of potassium treatment with the intravenous

treatment; have saved 70 per cent.—none before. Pathology —Am inclined to Schmidt theory."

Another—"Iodide of potassium per mouth, laxatives and stimulants, no success with Schmidt's mode. Recovery, 50 per cent. Pathology—Inclined to believe that the trouble is what we call parturition centre in the lumbo-sacral region of such nature that the nerves posterior to this cease to act."

Another—"Intravenous injection, potassium iodide per mouth, stimulants, hot fomentations to loins. Recovery, 75 per cent. Pathology—Am undecided."

Another—"Intravenous injection, hot packs to body and cold to the head, eserine hypodermically, and later strychnia. Of late using the potassium iodide treatment (Schmidt's) in connection with the above and less of the hot and cold applications. Gives no per cent. on success and no theory on pathology."

Another—"Laxatives and stimulants—nux vomica and brandy, counter-irritation to spine. Died after twenty-eight hours' treatment." Pathology, no theory expressed.

Another—"Liferoot and pulsatilla every two hours. Recovery about 70 per cent. Pathology, no satisfactory theory."

Another—"Bloodroot and pulsatilla every two hours, followed by magnesia sulphate and aromatic stimulants. I had seven cases one very wet week last June, most of them delivered in pasture, and all died. Had ten other cases, made good recovery." Pathology, no theory expressed.

Another—"Sulphate magnesia in one gallon of water, ice on head, stimulating liniment to spine, after acute stage nerve tonics and stimulants. Five out of eight recovered. Schmidt's treatment in five cases; all made good recovery. Pathology—A superabundance of blood in the system immediately after calving, which has been nourishing the fœtus, is divided in these new channels for the production of milk, and the mammary glands at this time are generally stimulated to utmost capacity, and therefore this blood instead of being converted into milk is retained in the system, causing degeneration of the nerves and centres."

Another—"All that has been recommended. Schmidt's treatment with better success. Recovery, probably 60 per cent. Pathology—Believe it is due to impression on the brain and spinal cord due to ptomaine poisoning or bacteria; do not believe all the fault is in the udder."

Another—"Epsom salts, common salt, gamboge; three doses of pulsatilla and liferoot and no more. Recovery 50 to 75 per cent. Pathology—I think that there is a large amount of nutriment in the blood that should go to the calf, or milk that is thrown back upon the system, and the large amount of blood that don't find a natural outlet is thrown back on the system, influencing the sympathetic system, which causes the bad circulation of the brain."

In the eleven reports only two give post-mortem conditions. One states: "Brain soft, bloodless and flabby"; this animal must have died after a few days' illness and the lesions thus found were secondary.

Another states: "I have held many post-mortems and I have always found thrombosis and embolism in the pelvic, sacral and also in the mesenteric blood vessels. Congestion of the various organs, the result, I think, of vaso-motor troubles. In the posterior pelvic and sacral regions the various tissues seem bloodless, soft and flabby and in a very dry condition."

I wonder if the doctor really meant what he said, *i. e.*, that he found thrombosis and embolism in the pelvic, sacral and mesenteric blood vessels, or were they post-mortem clots? If he found thrombosis and embolism, then such conditions must have been preceded by disease of the heart or blood vessels. An embolism is the obstruction of a blood vessel by an embolus; an embolus is a clot formed in one place and transported by the blood to another locality; such emboli are ante-mortem conditions.

To recapitulate: Nine gave medicines per mouth; three the Schmidt treatment; one the intravenous treatment; two the intravenous and Schmidt; two, ice or cold applications to head.

Of the number who have given medicines per mouth, not

one has stated how they were administered, whether by drench or through a tube. If the cow is in a comatose condition, medicines cannot be safely administered by a drench, as they are liable to pass down the trachea, causing asphyxia or choking. The animal that is repeatedly drenched and recovered, had but a slight lesion to overcome.

Franck gives a list of over 700 cases, with 60 per cent. recovery. This is in Europe, where the per cent. of recovery is very much reduced on account of the large number of animals that are slaughtered and used for food that in the United States would have the opportunity to recover.

Recently we see articles upon this subject headed "Parturient Paresis." This word paresis should not be used in connection with this lesion. We have only to consult lexicographers for the reason. *Universal Dictionary of the English Language:* Paresis, patho, insanity, with general paralysis. The loss of motor power is progressive. Those afflicted rarely live more than from one year to three years. *Webster:* Paresis, incomplete paralysis affecting motion but not sensation. *Duane:* Paresis, incomplete motor paralysis. *Dunglison:* Paresis, diminution of motor power; slight incomplete paralysis, affecting motion but not sensation, but by some regarded synonymous with paralysis.

Apoplexy is a sudden diminution or loss of consciousness, sensation and voluntary motion, usually caused by pressure on the brain. If this pressure is due to congestion or from other cause, when removed the animal recovers and is in no manner paralyzed. Then what is parturient apoplexy? There are already too many answers to this question. In a typical case, taken ill six hours after delivery, died ten hours later, without a struggle. I find on post-mortem meningeal congestion of the brain and spinal cord, hæmorrhage, a clot extending full width of the fourth ventricle with œdema or water. Can any one doubt that such conditions are sufficient cause for death?

The work of Friedberger and Fröhner, translated from the German and published in 1895, states that the pathological

anatomy presents nothing, or almost nothing, characteristic.

These animals cannot die without a cause. The symptoms are constant. They are that of coma, and coma is a symptom of lesions of the brain. Then we must look in the brain for the lesions. These are the primary lesions.

According to the percentages given our losses are still too great. I would earnestly ask the profession to make post-mortem examinations on the animals we lose, that we may agree on the cause of death. Until then treatment of whatever mode is to a certain extent empirical.

DEPARTMENT OF SURGERY.

By L. A. and E. Merillat,
of the McKillip Veterinary College, Chicago, Ill.

ABDOMINAL SURGERY.

ABDOMINAL OPERATIONS (*Concluded from page 446*).

5. *Enterostomy.*—This is an operation by which an artificial opening is made into the intestine so as to communicate with the external surface of the abdomen. The indications for such procedures are either for the treatment of surgical diseases of the intestinal tract, or physiological experimentation. An artificial opening may be made into the alimentary tract to introduce food into the intestine and relieve part of it of its physiological function, or for the passage of fæcal matter when the posterior part of the intestine is obstructed. When food is introduced in this manner it should be artificially digested (*peptonized*). This would not be a practical procedure in herbivora, but in carnivora or omnivora this method of administering food may be used to a good advantage. The formation of an artificial anus is not followed with very favorable results in large domestic animals, but in small animals temporary relief is often obtained in this way. Physiological experiments are often made by forming an intestinal fistula for the study of digestion. The indication for enterostomy may be enumerated as follows, viz.:

(*a*) For temporary relief.
(*b*) For temporary drainage.
(*c*) For permanent drainage.
(*d*) For curative measure.
(*e*) To ward off impending death.

(*a*) *For Temporary Relief* in case of symptoms of intestinal occlusion or tumors, ulcers and other pathological growths, enterostomy is an operation that is open to discussion, and when the patient's condition can be ameliorated by preventing the irritation caused by the passage of aliment over the diseased and highly sensitive portion, it should be selected as the means of giving temporary relief which may be an initiatory step toward a curative measure.

(*b*) *For Temporary Drainage.*—In some instances it may be necessary to resort to enterostomy in order to establish drainage for a day or two in order to fix the intestine, following volvulus, to assist immediate union of accidental or surgical intestinal wounds, or in case of extreme distention following intestinal operations.

(*c*) *For Permanent Drainage.*—Obstructions that cannot be removed require permanent drainage by forming an artificial anus (*enterostomy*). If the obstruction is located in the anterior or middle portion of the intestinal tract, the loss of chyle causes emaciation which is soon followed by death from inanition. When the opening is made in the jejunum or ileum the emaciation is very rapid, and the danger of prolapse of the intestine through the artificial anus is increased, which makes it a procedure not practical in veterinary surgery, except when used for physiological experiments; but, when the opening is in the great or floating colon the results are much more satisfactory.

(*d*) *For Curative Measures.*—In ulcerations of the rectum the condition may be aggravated by the passage of fæces over the hyperæsthetic area involved by the ulcer, and in such cases the condition can be improved by the formation of an artificial anus. In case of distention of the colon caused by the loss of tonicity of the walls, the accumulation of fæces often cannot be prevented by medication or administration of enemas, and in such instances the only remedy is to relieve the colon of its function by forming an artificial anus at the anterior portion and allowing it to regain its tonicity. Volvulus of the sigmoid flexion is sometimes successfully treated in this manner; in case of a recto-vesical fistula, enterostomy is indicated, and the false anus in such instances should be made in the floating colon, in order not to deprive the system of any of the physiological functions of the alimentary tract.

(*e*) *To Ward off Impending Death.*—As a measure to ward off death, enterostomy is seldom adopted in veterinary practice,

but it might in some cases be practical. The indication for such a procedure is generally cancer of the rectum or growths that cannot be removed. If the patient is near death from the disease or growth, and it is evident that the relief of the obstruction would prolong life for two or three weeks, and if any advantage can be gained by such an extension of life, the operation should be performed, otherwise it should never be undertaken.

Operation.—The patient should be cast, secured and anæsthetized, the site of the incision chosen, the hair clipped and surface shaved and rendered as near aseptic as possible; the incision is made through the walls and a loop of the intestine is brought through the incision and a stiff sterilized rod passed under the loop through the mesentery. If temporary drainage is required, an incision is made into the loop and a tube inserted; but for permanent drainage (*artificial anus*) the incision should not be made into the intestine for at least three or four days, when the adhesions of the intestine and the edges of the surgical wound made in the wall are complete. No sutures are required, and when the intestine is cut, it should be cut as near the posterior part of the loop as possible, which will atrophy and is soon out of sight; the anterior portion of the loop should protrude beyond the external surface of the walls to prevent the fæces from running over the surrounding skin. The chief object in view is to prevent infection, and the wound should be dressed accordingly.

After-treatment.—If the dressings are properly and carefully applied from the beginning, the wound will unite by primary union; the management of the wound depends chiefly upon the care taken to prevent infection. The best anus is the one that the mucous membrane is gripped by the parietal muscles; it never dribbles, and yields only to intestinal contractions and is closed by the contraction of the oblique muscles.

6. *Enterorraphy.*—In enterorraphy we include all intestinal sutures, and it will be impossible to consider all of them in detail, or to select any one of the methods that can under all circumstances be considered the best, for under certain conditions one may be practical while under another it may be counter-indicated; therefore the operator in each instance should select the method which he thinks will meet the requirements.

The needle used in making intestinal sutures should be round, with no cutting edge, and slightly curved at the point. The point should not be too sharp, so that in passing through the tissues it will not penetrate blood vessels, but push them

aside instead. The needle should be inserted in such a manner so as to give it the best possible hold on the tissue. The intestinal sutures used generally have already been described (REV., XXIV., No. 3), and it will be unnecessary to recapitulate.

Suture Material.—The material employed in suturing must be carefully sterilized, and should be selected according to the function it is supposed to perform. Catgut, silk, linen and Chinese silk supply the best suture material required in enterorraphy. Catgut should be used when the stitches are to be absorbed and can be relieved by a secondary series. All other suture material may be used when the stitches are to be sloughed off and passed out with the contents of the intestine.

Sutures.—The suture employed in enterorraphy may be either continuous or interrupted. The continuous suture can be used in making stitches that are cast off into the intestine, and in this connection are favored by operators. The chief advantage in its use is the rapidity with which it can be applied. The chief objection to continuous sutures is that they only remain firm as long as all the stitches remain secure, but they can be employed to good advantage with a secondary row of stitches. The interrupted sutures have already been mentioned and described.

After-treatment.—Shock is the first condition that requires attention. Stimulants should be given per rectum, and continued if the operation involved the part of the intestinal tract anterior to the floating colon, but if the part involved is located in the floating colon stimulants may be administered per os; however, rectal feeding is always preferable, because the presence of stimulants or food may stimulate the action of the intestine and interfere with the wound. The first food should be such as can be absorbed by the stomach and should be given in very small quantities. Strychnia may be given hypodermically to prevent paralysis of the intestine. Morphia may be used in the first stage, but after the third day mild salines should be given in small doses, and the remainder of the treatment is the same as in other intestinal operations.

7. *Gastrectomy.*—There is but little known of the total extirpation of the stomach; even in human surgery the operation has not been performed often enough to observe all the detail of the after-treatment. The management of such cases must yet be carefully studied before the operation is a success, and it should be performed when the opportunity presents itself if it be for no other purpose than to lay out a course of after-care.

The management of the intestinal tract following gastrectomy is worth considering and the proper method of handling such cases can only be learned by experimenting in that line. The only case of gastrectomy that we have ever seen performed was undertaken by a human surgeon who was familiarizing himself with the technique of the operation by experimenting upon a dog for the purpose of using such interference upon a patient whom he suspected of having a cancer of the stomach, which might require a complete resection of the stomach. The dog died three weeks after the operation from an overdose of morphia given to relieve pain caused by indigestion, and his patient (a man) never rallied enough to withstand the operation.

Partial Gastrectomy or Pylorectomy, is more commonly indicated than gastrectomy, and has been successfully used in diseases of the pylorus, such as cicatricial stenosis, ulcer and cancer of the pylorus. According to statistics given by Winiwater and Gussenbauer the majority of cancers of the stomach are located in the pyloric portion and seldom extend into the duodenum, and the results of 70 pylorectomies on human subjects compiled by McArdle (*Dublin Journal of Medical Sc., June, 1887*) are as follows : 24 died from the operation ; 14 from peritonitis and septic infection ; and 32 recovered ; some of which were reported well three or four years after the operation. Thus far no statistics of gastrectomy or pylorectomy have been gathered by veterinarians.

Operation.—The operation is more easily described than executed ; the arrest of hæmorrhage is not an easy factor ; and the isolation of part or entire organ requires careful manipulation. The procedure may be divided into the following steps, viz.:

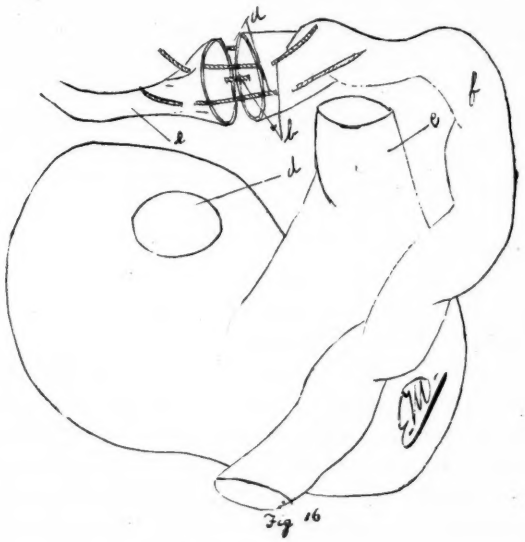
(*a*) Celiotomy.
(*b*) Isolation of part or entire stomach.
(*c*) Resection of part or entire stomach.
(*d*) Anastomosis or approximation.

(*a*) *Celiotomy.*—The incision into the cavity is made along the linea alba and only large enough to explore the epigastric and hypochondriac regions, and when the condition is ascertained the incision may be made large enough to facilitate the operation required ; when necessary an incision may be made at right angles to the first one which will give more room to manipulate the structures involved in the operation.

(*b*) *Isolation of Part or Entire Stomach.*—This part of the operation is the most difficult, and before attempting to use the

knife it is well to ligate the large arteries, viz.: the gastric branch of the cœliac axis; the left gastro-epiploric as near the splenic artery as possible; and the right epiploric as near the hepatic as possible. The large arterial branches found in the omenta should also be ligated. The gastro-phrenic and the gastro-hepatic omenta should be severed first and all hæmorrhage arrested; and the gastro-splenic and the gastro-colic (*great omentum*) next. When the stomach is disengaged it can be resected, but when only a part of it is to be resected, only the part of the omentum or omenta should be severed from the stomach that is diseased or involved in the structure to be removed.

(*c*) *Resection of Part or Entire Stomach.*—If part of the pyloric portion is to be removed, the walls of the stomach are divided and all hæmorrhage is arrested, the direction of the incision and the amount of the organ resected will depend upon the extent of the disease; and in every case the operator must adopt means of preventing the fluids of the stomach from escaping into the cavity, which is more difficult to accomplish than when the entire stomach is removed. When the resection is complete the ends are united by the simplest substantial method that can be employed to meet the requirements of the case. If



GASTRECTOMY.

A, Lembert's stitch; *b*, Czerny's stitch; *c*, pylorus; *d*, cardiac portion of the stomach; *e*, œsophagus; *f*, duodenum.

the entire stomach is resected, the œsophagus is united to the pyloric portion of the duodenum (Fig. 16), but before it is resected the contents of the duodenum is worked back, and a clamp or temporary ligature applied; the ends of the stomach can be ligated to prevent the escape of its contents into the cavity; when these clamps and ligatures are applied, the stomach is resected and the cavity well irrigated and all hæmorrhage arrested before any attempt is made to continue the work.

(*d*) *Anastomosis or Approximation* (Fig. 16).—When the preceding steps are completed, the ends are united; and in doing so the operator must resort to such methods which, in his judgment, will give the best results. In case of the entire stomach being removed, the ends are united as in intestinal approximation; if only the pylorus is resected, the pyloric portion of the stomach is united to the duodenum, and in such cases the intestine may be anastomosed with the stomach, as mentioned in the article on gastro-intestinal anastomosis (XXIV, No. 5.)

After-treatment.—For the first four or five days no food should be given by the mouth, but the patient should be fed on nutrient enemata. It is advisable not to give food that will stimulate gastric peristalsis, for such an action will disturb the wound. If the entire stomach is resected, food requiring gastric digestion should be given in small quantities at first, and increased gradually; but, if only a part of it is removed, food may be given per os much earlier than if a large portion or all of it is removed; in all cases, however, the first food should be peptonized. The patient must be kept quiet for a period of eight or ten days, and allowed only moderate exercise thereafter for at least a month or six weeks.

8. *Gastrotomy.*—In human surgery this is considered an old operation, which was performed as early as the 17th century for the purpose of removing foreign bodies from the stomach. In veterinary surgery the operation has been successfully performed on small domestic animals and ruminants. The indications for the operation are the presence of foreign bodies in the stomach, and growths on its internal surface. Foreign bodies that enter the stomach can generally pass through the pylorus; but long and heavy objects are often lodged in the fundus and cannot be removed without an operation. Small objects of a high specific gravity frequently collect in the stomach and interfere with gastric digestion; and, in such instances, the only remedy is to operate. Tumors and ulcers located in the mucous

membrane of the stomach, can also be successfully treated in this manner.

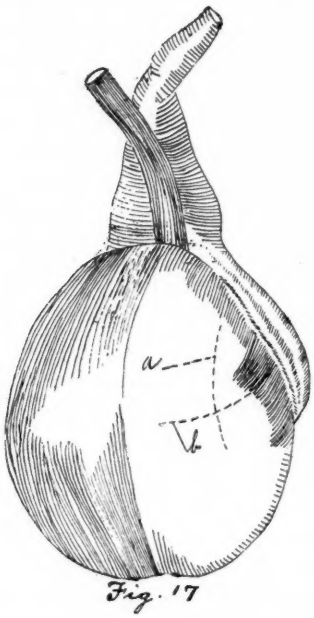
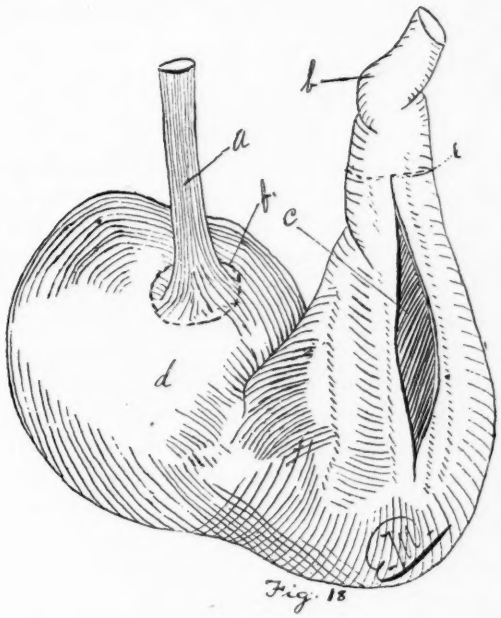


Fig. 17

GASTROTOMY.

A, Vertical incision; *b*, transverse incision in line with blood vessels.

Operation.—The patient must be cast, secured and anæsthetized; the abdomen is opened as in celiotomy; the incision made along the linea alba, and a secondary one may be made at right angle to the first. The incision in the stomach may be made in the pyloric or cardiac portion, and in some cases it may be made in the posterior wall, but in every case the incision should be made parallel to the large blood vessels. A small incision should be made and the stomach explored with the finger, to ascertain the condition, then it should be enlarged just enough to enable the operator to accomplish his purpose. Sometimes the foreign objects are embedded in granulations which bleed extensively when the object is removed; but, before closing the incision, such hæmorrhage must be arrested. When purulent or bloody material is found in the stomach, it must be removed; this can be done by a sponge held in a pair of forceps or sponge-holder. Cancers and ulcers can be curetted, and if confined to the mucous membrane only, the result of such treatment is generally beneficial (*Annals of Surgery, Dec., 1887*). Cancers



GASTROTOMY.

A, Œsophagus; *b*, pylorus; *c*, incision; *d*, posterior surface of stomach.

of the stomach are generally located in the pyloric portion, and at first are confined to the mucous membrane, but soon invade the sub-mucous coat, and finally attack the muscular and serous coats; when they invade the muscular and the subserous coats, they should be excised instead of curetted, and in doing so, care must be taken not to cause a perforation.

After treatment.—The things to be considered in the aftercare are the comfort of the patient; shock; pyrexia; thirst; food; tympanites; peritonitis, and renal secretions. Each of these may tax the surgeon to the utmost, and he should handle them judiciously, for the result of such operations depend to a great extent upon the management of the case after the operation.

8. *Rumenotomy.*—This is an operation that has been performed with very good success upon the ox and sheep. Many of the unfavorable results of the operation are due to procrastination; either the client is unwilling to submit the animal to the operation, or the veterinarian is reluctant about attempting it, and as a matter of fact, in many cases, the patient is beyond

recovery when such treatment is adopted. The indications for the operation may be any one of the following conditions, viz. :

(*a*) Acute tympanites.
(*b*) Chronic tympanites.
(*c*) Overloading of the rumen.
(*d*) Foreign bodies in the rumen.

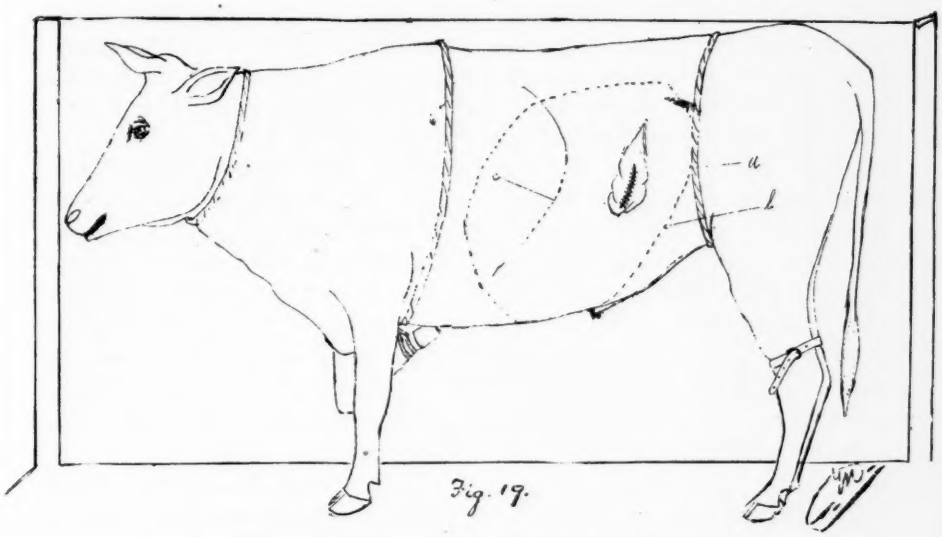
(*a*) *Acute Tympanites* caused by fermentation of the contents of the rumen, such as green fodder, green hay or clover, plants, leaves, potato stems, cabbage leaves and turnip leaves covered with dew or frost when eaten; besides, the condition may arise from eating apples, potatoes, turnips, or radishes. The fermentation of the vegetable contents of the rumen will generate gas, and when it cannot be arrested tapping will give temporary relief; but in such cases, the only radical method is to evacuate the rumen by the operation in question.

(*b*) *Chronic Tympanitis* that is caused by the accumulation of indigestible matter in the rumen which interferes with the function of the organ, can be relieved by the operation; but the periodic tympanitis which often accompanies chronic catarrh of the rumen cannot be cured by such surgical interference.

(*c*) *Overloading of the Rumen.*—Animals that have been fed upon one kind of food, which accidentally get access to another kind will often overload their stomachs to such an extent that digestion is impossible; the repeated attempts of the organism to perform its function is followed by the exhaustion of nerve force and the functional activity of the rumen is arrested; in such instances the function of the rumen cannot be restored by stimulants, or medication of any kind, and the only resort is to evacuate it by surgical means. If the contents is not removed, inflammation of the rumen may follow, but in some cases the patient may die of apoplexy or asphyxia.

(*d*) *Foreign Bodies in the Rumen.*—The rumen is often the receptacle of foreign bodies taken in preference to food by animals afflicted with an aberration of appetite (*pica*) common to ruminants; blankets, articles of clothing, hair, dirt and other indigestible substances are found in the rumen, and when the presence of these objects interferes with digestion the condition of the patient can only be improved by the removal of the substances that are the exciting cause of this functional disturbance, which in many cases can only be done by rumenotomy.

Operation.—The first step to be taken is the selection of a suitable place to operate; the next is to secure the patient properly. The operation is generally performed in a standing posi-



METHOD OF SECURING PATIENT FOR RUMENOTOMY.

A, rumen ; *b*, location of rumen ; *c*, costal border.

tion, and the patient should be so secured that it cannot lie down or injure the operator. In many instances, the surgeon can improvise some simple means of restraint, but the most convenient one is to place the patient in a stall or against a strong partition Four or six holes are made in the partition on the right side of the animal, two on a vertical line as far back as the hips of the patient, and two on a vertical line with the withers, and if the other two are needed they are made on a vertical line as far forwards as the pole. The surgeons casting ropes may be used to secure the patient (Fig. 19) ; a knot is made at one end and the rope is passed through the first hole over the back, around and under the abdomen through the second hole ; the rope is then drawn tight and taken diagonally across to the third hole and over the withers, around and under the thorax just behind the fore legs and through the fourth hole, when it is drawn tight and fastened securely ; if no other means of fastening the head is improvised the rope may be passed through the fifth and sixth hole. When this is completed the hind legs should be strapped together and one fore leg raised, leaving the weight of the animal on two hind legs and one fore leg. This method of securing will prevent the patient from lying down or injuring the operator. The hair must be clipped and the site of the incision washed with soap,

hot water and antiseptics. The incision is made a little anterior and below the left external angle of the ilium and obliquely downward and forward in the direction of the muscular fibres. This method of making the incision has its advantages and disadvantages; if the edges of the wound can be held together by the sutures they will unite quicker and leave a smaller cicatrix than when the incision is made across the fibres; the disadvantages are that the edges of the wound will "gap," the strain upon the stitches is greater than when the incision is made vertically, consequently the operator should use his own judgment in choosing the direction of the incision. If the incision is made vertically the edges of the wound will naturally draw together and as a result of this fact the strain on the stitches is lessened, but the wound will not heal as readily as when the incision is made in the direction of the muscular fibres. The incision should be made in the left abdominal wall at the point mentioned above; the direction of the incision should be chosen

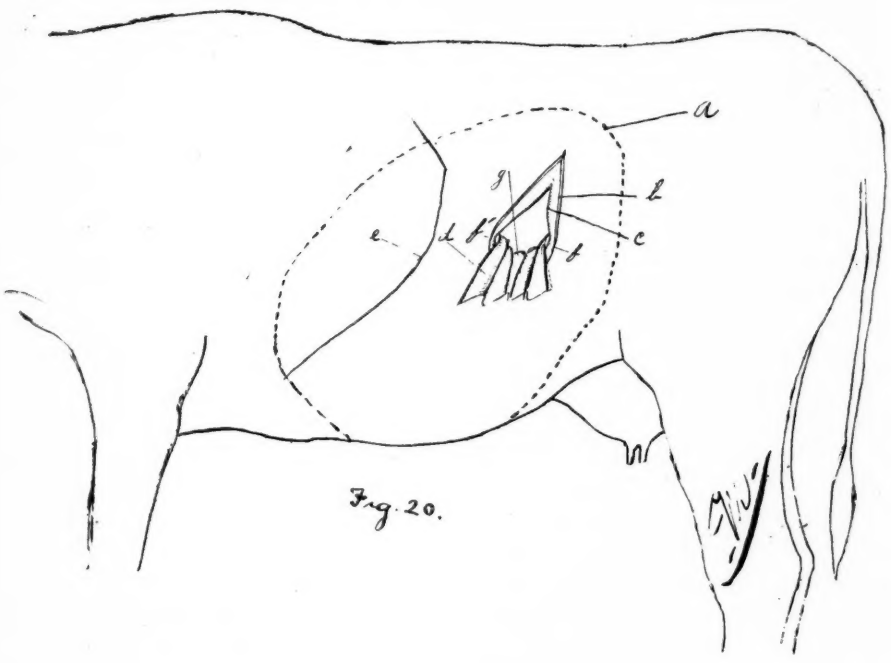


Fig. 20.

RUMENOTOMY.

A, outline of distended rumen; *b*, abdominal wall incised; *c*, rumen; *d*, towel or cloth; *e*, line showing posterior border of ribs; *f*, and *f'*, points where the rumen may be sutured to abdominal walls (ad lib.); inferior angle of incision.

by the operator, for in some instances the advantages gained by making it in one direction will more than counterbalance the disadvantages of the other; the incision should be from fifteen to eighteen centimeters in length; the skin and the muscles should be incised to the peritoneum, and then a small opening made into it at the superior part of the incision and incised with a probe-pointed bistoury or with the assistance of two fingers and a scalpel. If the rumen is so distended that it cannot be drawn through the incision, the gas should be allowed to escape by puncturing or making a small incision into it; a towel must be used to prevent the contents which may escape with the gas from entering the abdominal cavity. The incision into the rumen is made in the direction of the abdominal incision, and when the rumen is opened, a clean aseptic towel or cloth is inserted into the opening (Fig. 20) to prevent the contents of the rumen from entering the abdominal cavity; the towel may be stitched to the edges of the incision (Fig. 20, *f*, *f'* and *g*.) but with the assistance of an attendant this procedure can be omitted. When the contents of the rumen has been removed the incision of the rumen is sutured as in gastrorraphy and the abdominal opening as mentioned in celiotomy.

After-treatment.—Food stimulating the functional activity of the rumen must be withheld; small quantities of water with the "chill taken off" may be given at short intervals; stimulants may be added to the water. Möller refers to the administration of stimulants into the rumen before closing the incision, when there is danger of shock producing unconsciousness. After the third or fourth day easily digested food should be given in small quantities, and increased gradually. The vitality of the patient must be maintained by the administration of stimulants during the first two or three days after the operation. If the wound in the rumen was made with aseptic precautions it will require no attention; the lower part of the incision into the abdominal walls should be sutured so as to establish good drainage, and if no symptoms of sepsis are perceptible, it should not be redressed before the sixth or seventh day. In every case the patient must be kept quiet and away from other animals and flies; the comfort of the animal adds much to the probabilities of a good recovery.

Ovariotomy. Ovarectomy or Oöphorectomy (total ablation of the ovaries) of domestic animals deserves more than casual notice in a detailed discussion of abdominal surgery, because it is the most frequent if not the most important abdominal opera-

tion in veterinary surgery. It is performed upon all domestic animals, large and small, old and young, and as the live stock industry of the country increases it is prone to become more and more a special and important part of the veterinarian's duties. Where once the non-professional spayer was the only one to perform these operations the educated veterinarian with his increased knowledge is being called upon to perform them. The latter with his accurate knowledge of surgical anatomy and pathology needs only to borrow the surgical technique and dexterity of the former to finally monopolize this entire domain, and until we have done so we are ill prepared to criticise the methods of even the most uneducated spayer. His superior dexterity will easily overbalance our superior knowledge of surgery because of the striking resistance most of the domestic animals offer to septic processes. Add, however, the dexterity of the former with the knowledge of the latter and the diminution in serious sequelæ at once becomes apparent.

Besides adhering strictly to the general rules by which all surgical operations should be performed the spayer *must* follow particular means of restraint, particular surgical positions for the patient, special locations for the incision, special means of exploration and finally special methods of resection, all of which vary according to the genus upon which the operation is performed. We will therefore discuss the subject in three chapters—viz. :

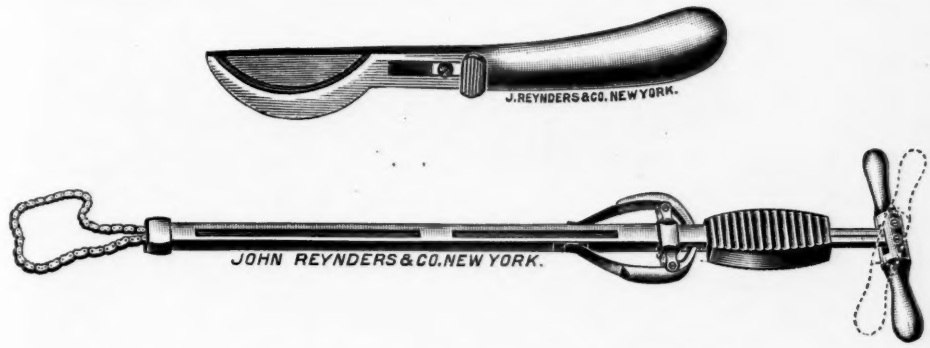
(1) Ovariotomy of Equidæ.
(2) Ovariotomy of Bovidæ.
(3) Ovariotomy of Carnivora and Omnivora.

OVARIOTOMY OF EQUIDÆ.

Aside from a number of rare pathological conditions the only indication for the operation in mares is so-called nymphomania, a condition manifested by vicious switching of the tail simultaneously with micturation of small amounts of slimy urine. Such animals always have "bad tempers," which they are prone to display on the least provocation by kicking, biting or striking, and when bred they usually prove sterile.

Operation.—[Through the courtesy of Dr. W. L. Williams, Professor of Veterinary Surgery and Obstetrics at the New York State Veterinary College, we are able to give the readers of the REVIEW the following detailed description of the method adopted at his clinic] :

Instruments.—Colin's scalpel, ecraseur 55 cm. long.



Technique.—Operate on the standing animal. Stocks are *par excellence* the proper means of restraint and are essential to the best results. In absence of stocks other means of restraint may be improvised. Secure the head elevated, prevent arching of the back or rearing, by a rope over the back, prevent lying down by two straps beneath the body, and movements backward or forward by ropes or straps behind and before the animal; pinion all four feet and secure the tail tightly stretched upward to a beam.

With soap, water and brush cleanse the tail, perineum and vulva thoroughly, being especially careful to remove all detachable masses of sebum, 50 per cent. alcohol may be used sparingly to aid in removing the sebum. Too free a use of alcohol excoriates the delicate skin. Cleanse the clitoris carefully. Follow the washing with a free application of 1 : 1000 aqueous sublimate solution to the external parts and for a short distance (½cm.) inside the vulvar lips and to the clitoris. Do not introduce disinfectants into the healthy vagina nor deeply into the vulva as it will cause severe straining during and subsequent to the operation and by injuring the vulvo-vaginal mucosa favor subsequent infection of the vaginal wound. Wash away the sublimate solution with a tepid sterile .6 per cent. soda bicarbonate solution, and fill the vulvo-vaginal canal with the same. After thorough disinfection of the hands and arms remove the disinfectants by washing in sterile soda solution, which at the same time renders the hand unctuous and readily introduced through the vulva. Armed with the sterilized scalpel introduce the right hand into the vagina promptly and when the vagina is well "ballooned" unsheath the knife and placing it just above the os uteri (*I* Fig. 25) parallel to the long axis of the uterus and a few mm. to the right or left of

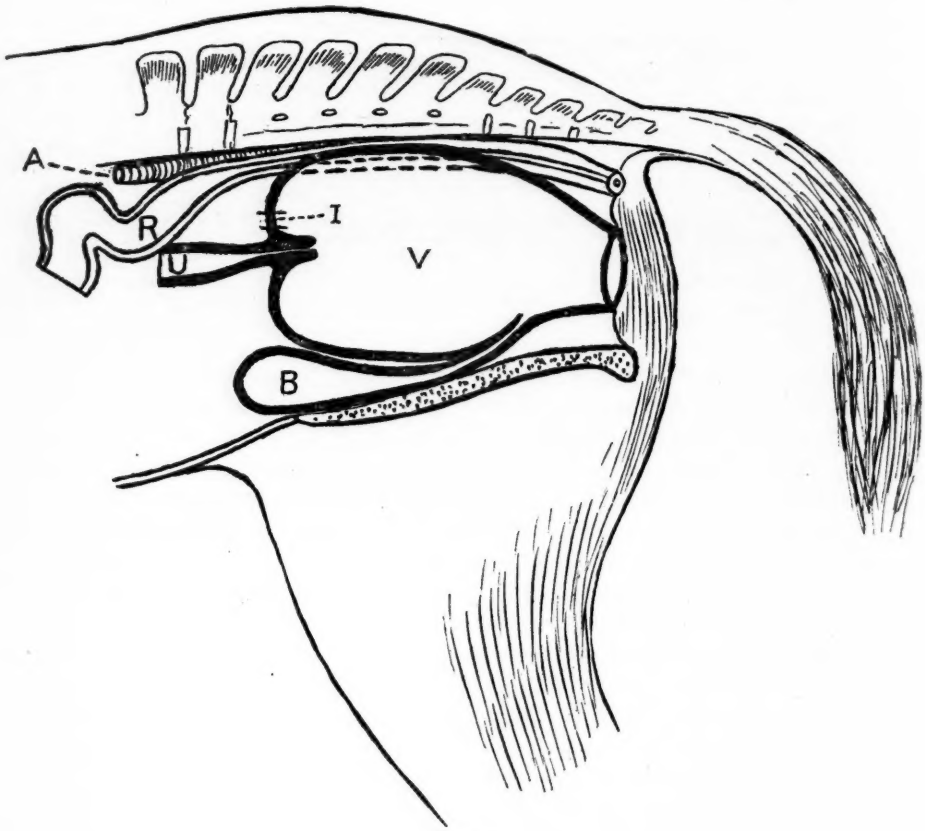


FIG. 25.

VAGINAL OVARIECTOMY.

Diagrammatic sagittal section through dilated vagina of mare. *A*, Aorta; *R*, rectum; *U*, uterus; *V*, vagina; *I*, vaginal incision.

the median line, the blade being held vertical, that is, the cutting surface parallel to the longitudinal muscular fibres of the vagina, and guarding the possible extent of its introduction with the thumb and fingers, push it directly forward in a straight line with a quick thrust through vaginal mucosa, the muscular walls and the peritoneum until the disappearance of resistance indicates that the peritoneum has been penetrated. This is the most critical step in the operation. The vagina of the mare possesses the property of dilating in a remarkable manner like a balloon filled with air, occupying at such times practically the entire pelvic cavity, the rectum collapsed, and the roof of the vagina stretched firmly against the sacrum and in

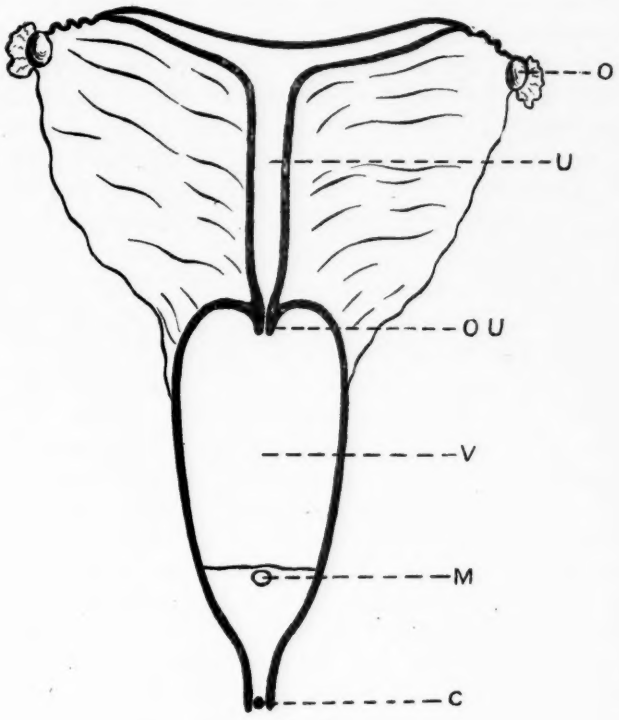


FIG. 26.

VAGINAL OVARIECTOMY.

Diagrammatic horizontal section of uterus and dilated vagina. *C*, clitoris; *M*, urinary meatus; *V*, vagina; *OU*, os uteri; *U*, uterus; *O*, ovary.

immediate contact with the great pelvic vessels (*A* Fig. 25), while at the sides and below the vaginal walls are generally in immediate contact with the bony walls of the pelvis. The roof of the vagina, when at rest, is in contact with the floor of the rectum and attached thereto by connective tissue until within 6 to 8 cm. of the os uteri, where the two organs are separated by a peritoneal duplicature which constitutes the operative area. This operative area, parallel to the rectum when the vagina is at rest becomes perpendicular to it when "ballooned," so that the operator needs to make his incision directly forward through a tense, thin, perpendicular wall like a drumhead. There is in this state no operative area above whatever and an upward incision wounds the rectum and perhaps the posterior aorta or one of the iliac arteries.

If the hand is introduced immediately after the injection of

the sterile saline solution the vagina will generally be found "ballooned," or will quickly become inflated under movements of the hand. If the solution is thrown out the vagina may collapse and closely invest the hand, in which case more soda solution should be injected, when it will again dilate. If the hand is introduced without the knife, withdrawn and then introduced with the knife it will be frequently found that the vagina has collapsed and needs a second filling with the fluid. Patience until dilation is accomplished and promptness to act when attained are prime requisites to success. The knife should be pushed through the vagina quickly, making a clean wound the width of the knife-blade, when the latter is to be withdrawn and laid aside. It should be remembered that in this "ballooned" state the anterior wall of the vagina is but 2 to 3 mm. thick and easily penetrated, the completion of the wound being indicated by the sudden disappearance of resistance. Introduce the hand again, insert one finger in the incision, then a second finger, and holding the fingers in the form of a cone, push the entire hand into the peritoneal cavity. Immediately below the incision and continuous with the tissues involved in the wound lies the uterus with a transverse diameter of 4 to 6 cm. With the palmar surface of the hand downwards, trace the uterus forward a distance of 15 to 18 cm., where it ends abruptly in two cornua of about the same size as the uterus, which are given off horizontally at almost right angles. Trace these to right and left for a distance of 14 or 15 cm., where they end obtusely, and 3 or 4 cm. beyond this in a direct line, resting upon the anterior border of the broad ligament is the dense oval ovary varying in size from 2.5 to 7 cm. in diameter. Withdrawing the hand, carry the ecraseur enclosed within the hand through the vaginal wound to the region of the ovary, release the ecraseur and retrace the parts if necessary, and locating the ovary, drop the chain over the ovary from above and either grasp the ovary with the fingers through the chain loop from above and draw it into the loop or, passing one or two fingers around beneath the ovary, push it up through the loop to be grasped by the thumb and index finger above. The chain loop should be of barely sufficient size to admit of the easy passage of the ovary. Holding the ovary with the one hand tighten the chain quickly with the other, examine to make sure that a loop of intestine is not caught, draw the ovary well through and get a large portion of the oviduct, and cut off promptly, holding to the ovary until

carried out through the vulva. Remove the other ovary in the same way. Generally it is most convenient to remove the left ovary with right hand, and *vice versa*, but both may be removed with either hand. Wash away any blood from external parts, apply sublimate solution freely to vulva, perineum and tail. Keep the patient quiet for five or six days, and feed lightly on laxative diet. If infection occur mop out the vagina with antiseptics. If abscesses form, open them promptly into the vagina or rectum by thrusting an index finger through their walls. If the infection causes difficult defecation by pressure on the rectum or swelling of its coats through inflammatory implication, keep the fæces pultaceous by means of enemas.

(*To be continued.*)

SURGICAL ITEMS.

It is of course much easier to obtain asepsis in a well regulated operation room than in a private stable, yet there is no doubt that much can be done in that direction even in the latter under all conditions ordinarily encountered. The preparation for an operation in a stable, while frequently a difficult matter, should never be entirely overlooked, and the veterinarian should go prepared to meet the emergencies which may arise in this connection at all times. There can be no excuse so far as clean instruments, clean dressing and the necessary chemical disinfectants are concerned, and it is usually possible to find a suitable place for securing the patient. A real obstacle, however, that is met both in city and country practice is the difficulty of securing pure water for the antiseptic solution and clean containers to hold them. The veterinarian is usually offered ordinary stable pails or a dirty wash pan filled with water of doubtful purity, and it is usually impossible to impress a stableman with the importance of having these items immaculate in the surgical sense of the word. It is therefore evident that the surgeon who operates away from his own equipped room should provide himself with implements which will in a measure overcome this obstacle. A common zinc or porcelain coffee pot with a capacity of about two litres will be found a very useful article to have continually in one's vehicle ready for use. Solution in such a vessel can be kept clean and can be poured upon a surface to good advantage and without waste. A flat zinc or porcelain pan is also useful, but has the disadvantage of being more difficult to keep perfectly clean

than the inside of a covered pot. In choosing the liquid with which to make an antiseptic solution it would of course be preferable to demand boiled or sterilized water, but it is needless to state that such can seldom be readily obtained, in view of which fact we must be content with water from other sources. Tap water of cities is *always* dangerous and well water (except possibly of deep, drilled wells) is no better. Spring water as it comes from the earth or well water from a drilled well that is used continually may be reasonably supposed to be free from bacteria. While it is of course not always convenient to secure just what is wanted we should always use doubtful water with a full knowledge of the dangers that may emanate from them. Avoid, when possible, any form of surface water, pool water, ordinary well water, city tap water, creek or river water, and above all things avoid using water in stable pails.—(*L. A. M.*)

A new method of performing tracheotomy that is proving very successful consists of inserting a flattened tube between the rings instead of cutting them. The marked and immediate relief obtained and the simplicity of the operation of tracheotomy makes it very enticing to the young practitioner, who seldom fails to resort to it on the least provocation ; but the old experienced surgeon has learned to regard tracheotomy as really a dangerous procedure, and operates reluctantly and as seldom as possible, because many animals so treated are rendered useless from tracheal stenosis. The new method is believed to obviate this sequel. Veterinarians should try it and observe the results.—(*L. A. M.*)

This department neither recommends nor condemns the various neurectomies for the cure of spavin lameness that are receiving so much attention at present in current veterinary literature, but in the face of the very complex distribution of the nerves of the pelvic limb we are unable to comprehend how a neurectomy of the peroneal or posterior tibial (sciatic) nerves, or of both, just above the articulation, can prove effective, and certainly, at this writing, the results would indicate that the real neurectomy for spavin is not yet among "the powers that be."—(*L. A. M.*)

To obtain the best results from low plantar, or in fact any neurectomy, the patient should be allowed a protracted rest after the operation. A month's run at grass or in a loose paddock, as circumstances permit, will always pay both the client and surgeon for the extra time and expense. Such a course

gives the unnerved parts time to accommodate themselves to the new condition, favors healing of the disease for which the operation was performed, and last, but not least, permits every iota of hyperasthesia to leave the surgical wound.—(*L. A. M.*)

EXTRACTS FROM EXCHANGES.

GERMAN REVIEW.

By Adolph Eichhorn, D.V.S., New York City.

The Changes in the Dog in Rabies, and the Pathologic-Anatomical Diagnosis of this Disease [*By G. Hébrant*].—The diagnosis of rabies on dead animals has always been known to be difficult, as the disease does not leave specific changes which could be detected by the naked eye. The histological examinations of the central nervous organs were also without positive results. On the other hand, last year, Nelis published a work in which he communicates that the peripheric, cerebro-spinal and sympathetic ganglions always show marked changes, produced by the virus of rabies. *These consist of atrophy, immigration of new cells into the nerve cells, and destruction of the same.* This work of Nelis received a prize from the Belgian Royal Academy of Medicine. The author examined the results of Nelis, and confirms the same. The principal change shows the plexiform ganglion (*Plexus gangliformis de Willis et de Vicusseus*); the same is in the dog spiral shaped, and in large dogs, it may reach the length of 1 cm. It lies on the vagus, shortly after its exit from the jugular foramen, and touches the superior cervical ganglion; this lies on the sympatheticus, is reddish and oval shaped. To find the ganglion is quite easy. After the removal of the skin and muscles, which cover the lateral face of the larynx, we meet superiorly to this the common branch of the vagus and sympatheticus, which is to be followed upwards until reaching the wing of the atlas. Here it bifurcates; the stronger branch is the ganglion plexiform, while the finer guides the superior cervical ganglion. For histological examinations, the questionable ganglion is to be put for 12 hours into absolute alcohol, then for one hour in xylol or chloroform, following this by the paraffin imbedding. The sections are dyed after Niss' method. —(*Annales de Med. Vet.*)

TWO CASES OF GENERALIZED TUBERCULOSIS IN HORSES [*By Knipsher*].—As it is important to publish all the cases of tuberculosis in horses, the author publishes the following made in his artillery regiment observations: Both cases showed almost the same symptoms; but a diagnosis was only made on the second horse on the grounds of the autopsy of the first case. Both horses had good appetites, almost until death, at the same time becoming more and more emaciated and losing strength. There was hardly a change in the pulse, respiration and temperature; discharge from the nose and cough were absent, also all the changes on percussion and auscultation. All that was striking was the continual loss of flesh, without any explainable reason; the very pale conjunctiva, and at the end the swelling of the hind extremities, and the beginning of polydipsia and polyuria. Examination of the urine showed only a slight quantity of albumen; sugar; kidney epithelia, etc., were not present. On post-mortem of the first horse, it was found that almost all of the organs contained different sized tubercular nodules, the most affected proved to be the greatly hypertrophied lung and bronchial lymphatic glands. The second horse was affected in a milder way, as the intestines, liver and kidneys were normal; on the lungs and mesentery could only be noticed small herds of tubercular nodules. On the spleen there was found a tubercular new formation of the size of a hazel nut, and on the diaphragm, one of the size of a pigeon's egg. All over, however, especially in the bronchial secretions, were found numerous bacilli of Koch. From these conditions it can be easily noticed. As to the few symptoms we can observe in a case of generalized tuberculosis in a horse, *intra vitam*, as even the strongly affected lung will not give any disclosure, so as in the absence of a nasal discharge the diagnosis is very difficult or impossible. A rather more supporting point is the increased thirst and polyuria near the termination of the disease, and both these symptoms, as has been observed, seem to occur in almost every case of which the motive is not explained yet. Nocard observed polyuria lately in eleven cases of abdominal tuberculosis in horses.—(*Deutche Thierart. Wochenshrift.*)

CONTRIBUTION TO THE STUDY AND PATHOLOGY OF PARTURIENT APOPLEXY [*By Dr. H. Van de Velde*].—The study of parturient apoplexy by the author, brought out a new theory with the conclusions that the disease is caused by different micro-organisms, either single or mixed (streptococci, staphy-

lococci, bacterium coli), of which the characteristics are similar to those in men. The author distinguishes in parturient apoplexy a simple infection, caused by one of the mentioned micro-organisms, in their highest virulency, and mixed infections, which are caused by the colonization of several of these organisms. The seat of the infection causing this disease is in the uterus, and the disease itself is an intoxication, due to the poisonous products of the micro-organisms, which under suitable conditions may reach the blood. As results of the methods of the author's investigations, he came to the conclusion that amongst the streptococci causing parturient apoplexy are at least two varieties, of which the characteristic differences are in their form and culture, and the mode of differentation lies in their property of agglutination of the particular antistreptococci forms. He proved that the streptococci and also the vibrio of cholera, and many other microbes, have the property to become agglutinated under a condition, when a serum is employed, which is obtained by inoculation of the streptococci in question, and closes with the remark that it is very probable that the valuable serum mentioned will act as a curative over the streptococci causing the disease.—(*Monatsh. f. Thierheilk.*)

More Statistics in Regard to Schmidt's Treatment of Parturient Apoplexy [*Rüsterholz Schweitz*]. — The author, after sending practical questions to many veterinarians, in regard to the results of the Schmidt's iodide of potassium treatment, received the reports of 197 cases, treated by 35 practitioners, and of which the conclusions are as follows: Of the 197 cases treated 154 (78.17%) recovered; 40 (20.30%) were slaughtered, and only 3 (1.42%) died; the results were thereby in 43 cases (21.82%) unsatisfactory. Of the 154 recovered cases 11 had to be slaughtered, in a relapse of a few days—5 for traumatic pneumonia, 2 for mastitis, 2 for disturbance in digestion, 1 for muscular rupture, and 1 for tuberculosis.—(*Archiv. f. Thierheilk.*)

ENGLISH REVIEW.

Peroneal and Posterior Tibial Neurectomies [*By Fred. Hobday, F. R. C. V. S.*].—The application of neurectomy to relieve peculiar forms of lameness has been for some time admitted into veterinary surgery, specially for the relief of lameness of the anterior extremity. For similar difficulty of the hind leg, the operation has not been used so often, princi-

pally from the fact that the sequelæ are too severe and that at best only relief for a varying length of time was all that could be expected. Professor Hobday, of the Royal Veterinary College, in the *Journal of Comparative Pathology and Therapeutics*, records a series of experiments which he has made and the results which he has obtained in performing peroneal or posterior tibial, or both, on subjects affected with spavins, ringbones, indurated windgalls and chronic sprains of tendons. From these operations it is shown that, in five instances, the double operation was performed, while the peroneal nerve alone was cut in eight cases and the posterior tibial only in nine cases; that where the spavin was the only lesion detected, section of the peroneal gave relief in five cases, and in two cases of the posterior tibial lameness was perceptibly improved; that in cases of chronic sprained tendons, with great pain, and where the lameness is not mechanical from contraction, posterior tibial neurectomy has rendered an otherwise useless horse fit for work again for a time in seven cases, and that there is great risk of ruptured tendon or of the foot sloughing, as it occurred in three cases, a complication which the owner of the horse should always be warned of.—(*Journ. of Comp. Path. and Therap.*)

GYMNASTICS EXTRAORDINARY.—Under this heading Mr. H. J. R. Pope relates the case of a fox terrier which was brought to him suffering from concussion of the brain from a fall he had made in jumping over a railing and tumbling a distance of 103 feet and 11 inches onto solid concrete. No treatment was adopted apart from the concussion of the brain; the patient was simply left quiet and fed on sloppy foods. Beyond a little stiffness he showed no soreness and never refused a meal. In four days he was discharged.—(*Vet. Record.*)

BULLET AND SHELL WOUNDS IN HORSES [*By Vet. Lieut. R. C. Cochrane, A. V. D.*].—Fifteen horses, wounded at the battle of Colenso with Mauser bullets or shells, were treated by the author, with 13 radical recoveries, one killed, and one death from bowel complication. Mr. Cochrane remarks that for a couple of days after admission the animals were very nervous and scoured greatly. The wounds caused by the bullets were small and with little or no discharge. The shell wounds were larger and nearly all suppurated freely. When the pieces of shell were not extracted, the wound took longer to heal and discharged more profusely. The treatment consisted in strong spray of water from a hose pipe once or twice a day,

when the wound was then dressed with either chinosol, iodoform or boric acid; all the wounds were covered first with antiseptic wool and then with butter muslin, which is less irritating and prevents the access of flies. Most horses were operated upon for the removal of the foreign bodies which were accessible, in the standing position, sometimes even without a twitch.—(*Vet. Record.*)

FRACTURED FIRST RIBS [*By W. W. Goldsmith, M. R. C. V. S.*]—To serve to add to the history of "dropped elbow," with fracture of the first rib, the author reports the history of an aged mare to which he was called to relieve from an attack of colic. He left her after being a while comparatively easy, but when he returned a few hours later, he found her very lame on the off fore leg, with her elbows dropped. She ate well. In the morning she was unable to get up, except after considerable struggling, and then stood only for a few minutes. She was slaughtered, and at the post-mortem the first and second ribs were found broken on both sides. The author believes that she tried to lie down during the night, and the off leg being powerless she fell on the sternum, breaking the near ribs.—(*Vet. Record.*)

ACCIDENT TO THE FOOT OF A HORSE [*By A. Rogerson, F. R. C. V. S.*].—A brown gelding, 13 years of age, was used for the class of work known as truck shunting, and for seven or eight years he had done his work well, without mishap beyond a few slight injuries. One day while he was pulling an empty truck, his near hind leg slipped and the wheel passed over the outside corner of the shoe; the horse felt the resistance, made a greater effort to release his foot, and in so doing snatched his foot completely out of the horny box. He was destroyed at once. Previous to this accident the foot of this animal had been perfectly healthy and sound, and neurotomy had never been performed on him.—(*Vet. Record.*) [A similar accident occurred to a horse in Brooklyn. Becoming cast in his stall, he pushed his off hind foot through the stall partition, the shoe catching firmly in the opening, and he was found the next morning minus the entire hoof, which had parted from the keratogenous membrane with very little laceration. The foot was perfectly healthy, and the hoof has been in my collection of specimens ever since.—R. R. B.]

CELLOIDIN AND CHINOSOL [*By E. P. Edwards.*].—*Celloidin.*—For the author, this substance is far superior to collodion for fresh and surgical wounds with a view to obtaining healing

by first intention. It is especially useful in wounds of the teats, eyelids or with those of small patients. It has given excellent results to Mr. E. in cases requiring antiseptic dressings by the addition of iodoform. *Chinosol.*—The author prefers its use to that of potassium iodide in milk fever. He claims that comparing the two chinosol has given him better results. Injections of 40 or 60 grains of pure chinosol in one or two quarts of boiled water give more rapid control of the cerebral symptoms, excitement and pain than the iodide. The percentage of complete recoveries is higher. In mammitis, the author uses it in hard and inflamed udders, from whatever causes. An injection of 20 grains of chinosol in one pint of boiled water for each diseased quarter gives best results. In a series of cases he has found the animals get well in from 12 to 24 hours. The treatment is perfectly harmless and deserves a trial.—(*Vet. Record.*)

RUSSIAN REVIEW.

CONTAGIOUS LAMENESS OF HORSES [*By Sotsevitch*].—Under the name of *Potchitchoni* is known an epizoötic affection of the digital extremities of horses. It affects most ordinarily one foot at a time and appears with great lameness, before any local lesion is manifest. Then, in the diseased region vesicles of small size occur, filled with white yellowish exudate, which soon becomes purulent. The skin soon sloughs, then the cellular tissue beneath, the aponeurosis, muscles and tendons, and leave an ulcerated wound of various sizes, from which flows a yellow fœtid abundant discharge. The skin of the region becomes yellow, the hairs are staring and drop out, the epidermis falls off. At the onset the animal is dull and has no appetite, the temperature rises to 39.5° and above; then the inflammatory manifestations subside, the sore foot carries weight and the outer symptoms disappear. The skin gradually returns to its normal condition and recovery is completed in 2 or 3 weeks. The affection is more commonly localized around the coronet and seldom extends beyond the first phalanx. If it goes higher it is less serious. Complications toward the hoof are not uncommon; purulent infiltration and partial separation of the wall may be observed then; sometimes synovial sacs ulcerate when the disease progresses towards the joints. Lastly, when the inflammation is extensive, the skin may remain much thickened and the leg look like that of elephantiasis. Bacteriological

researches have shown in the vesicles *staphylococcus pyogenes aureus* and *streptococcus pyogenes.* It is easy to understand the action of these two microbes, which can live a long time on the ground, especially when it is damp, and hence enter the organism through the abrasions of the skin of the digital extremities. The treatment is simple and consists in dressings with sublimate. Prophylaxy consists in isolating the sick from the well animals, and in avoiding the low marshy lands where the microbes possess all their vitality.—(*Archiv. Veterin. Naouk and Rec. de M. Vet.*)

TREATMENT OF CAPPED ELBOW BY COLLODION AND LIGATURE [*By Ouchmorov*].—When capped elbow contains liquid, or only begun to become organized, the author treats them as follows: The hairs are shaved all over the extent of the tumor; the skin is then washed with green soap and rubbed dry. All over the indurated part of the tumor, ordinary collodion is spread. If there is a wound iodoformed collodion (4 per cent.) is used. During the first week the application is made daily, then every two days. Generally after three weeks the tumor has disappeared. When the tumor is indurated or of cartilaginous consistency, collodion is powerless. The author recommends its removal as follows: An incision is made through the skin all around on the base of the growth; in this a ligature firmly tight is applied; the tumor is then projecting much and its excision is easy with a bistoury or the thermocautery, which is better, being aseptic and arresting hæmorrhage. Generally the sequelæ are very simple.—(*Archiv. Veterin. Naouk and Rec. de M. Vet.*)

FRACTURE AND RESECTION OF A RIB IN THE HORSE [*By Blisnakov*].—A horse, one of a team, took fright, made a jump sideways and fell on the pole and one of the harness hooks tore his right flank, fracturing the last rib on the same side. The cutaneous wound measured about 20 centimetres, but the muscles under were torn about 50 centimetres long. The region of the last rib was somewhat swollen, the fracture of the rib was well detected; the upper segment was concealed by the muscles; but the lower one was pushing upwards and outwards. The skin of the flank was sutured with antiseptic thread and a bandage applied around the chest to keep the lower fragment of the rib in place. This proving unsuccessful, excision of the lower portion of the rib was decided upon. The operation was done with the animal standing. The skin was divided on a level with the fracture, as well as the muscles be-

neath the incision, being vertical and six or seven centimetres long. The costal piece was thus exposed, pulled outwards as much as possible and resected 16 centimetres below the fracture. The lower end of the rib which remained fixed to the sternal cartilage, resumed its normal position. Cicatrization went on without complication.—(*Archiv. Veterin. Naouk and Rec. de M. Vet.*)

REVIEW OF BIOLOGY.

HEPATIC TREMATODS OF BIRDS [*By A. Railliet*].—Contrary to what may be believed, the biliary tracts of birds have yet been very incompletely explored to the point of view of researches for parasites. Mr. Railliet has made a certain number of observations which have allowed him to study various forms of trematods, partly new or little known. They are seven in number and are found in various species of crows, magpies, jays, blackbirds and sparrow hawks. A somewhat curious fact is that all the parasites belong to the gender *Dicrowelium* (Dij), such as recently defined by Loys, while a good number of hepatic trematods of birds to this day belong to different genders.—(*Soc. of Biol.*)

PIROPLASMA CANIS—INFECTIOUS JAUNDICE OF THE DOG [*By P. Leblanc*].—The author has already announced that he has found hæmatozoa in the blood of a dog affected with infectious jaundice. He offers four new observations, which lead us to believe that in all the cases of infectious jaundice of the dog these parasites are found, and that they play an important, if not an exclusive part in the pathogeny of this disease. These hæmatozoa are very analogous to those discovered by Dr. Marchome in the dogs of Senegal. They are much bigger than those of cattle or sheep. They are rare in the plasma; 1, 2 or 3 may be found in the same globule; they are spherical or ovoid, rarely pisiform; sometimes they look like two ovoid masses united by a contracted part.—(*Soc. of Biol.*)

INFLUENCE OF THE PHYSIOLOGICAL WORK OF TISSUES UPON THE PRODUCTION OF LYMPH [*By Prof. G. Moussee*].—Continuing his experiments on the lymphatic circulation and studying the influence of work upon it, the author seems to demonstrate: (1) that the physiological work of the cephalic regions increases enormously the lymphatic circulation; (2) that the muscular actions seem to act principally upon the secreting influences.—(*Soc. of Biol.*)

INFLUENCE OF STATICAL WORK OF TISSUES ON THE ELABORATION OF LYMPH [*By Prof. G. Moussee*].—It is considered that the experiment of Hamburger demonstrates the error of the part played by the pressure of the blood in the elaboration of lymph. A lymphatic fistula is made on the neck of a horse, then the head being kept immobile, the body and legs are made to move. Under this influence of work, pressure diminishes in the carotid and jugular, and yet the flow of lymph is double or treble. The author has renewed the same experiment in stricter conditions and has obtained the same results. But it must be remarked that for the body and legs to perform an apparent work, the muscles of the neck must be kept in a moderate state of contraction to give the head and neck a sufficient rigidity and fixity. Then it is again in this case the organic work which represents the principal source of the elaborated lymph.—(*Soc. of Biol.*)

ON THE RESORPTION OF THE BLOOD INJECTED IN PERITONEAL CAVITIES [*By J. Lesage*].—From the experiments of Hayem it is known that the blood injected in the peritoneum is absorbed in nature and returns to the general circulation with its proper elements. Lesage made a fistula of the thoracic duct in a large sized dog; then he isolated the carotid and transfused 200 cc. of carotidian blood in the peritoneum of the same animal. He observed that, one hour after this abundant hæmorrhage experimentally produced in the peritoneum, the red globules soon began to pass freely, without alteration and in great number through the thoracic duct. Then, by a strong diapedesis on the peritoneum, the leucocytes come to surround the hematics that remain, they re-enter with them in the thoracic duct, in such a manner that the serous membrane has a few days after the transfusion resumed its normal aspect.—(*Soc. of Biol.*)

BIBLIOGRAPHY.

TRISTEZA OR BOVINE MALARIA IN ARGENTINE REPUBLIC. By Prof. J. Lignières.

Under this name is published the result of the second year of the scientific mission of the author, which he has dedicated to Professor Nocard, and in which are found facts which are entirely new, with others which come to confirm those already known of Texas fever.

Tristeza is identical with this last named disease, already so well studied by our American *confrères*, Smith and Kilborne.

It prevails in the endemic state in the north of the Argentine Republic, killing animals by the thousands and inflicting losses that are counted by millions of dollars. It is principally after long warm seasons that it appears, assuming two forms—one benignant, the other severe. This last affects adults in preference, and is characterized by dullness, fever and hæmoglobinuria. Death ordinarily takes place in two to eight days; few animals recover. The benignant form, more special to young animals, may pass overlooked.

At the post-mortem, the lesions found are: great hypertrophy of the spleen, which is hard and friable; the liver is congested when death takes place rapidly; it is yellow and easily torn if the disease progresses slowly. The kidneys are congested, almost black, or again pale and soft if death is slow. The blood is clear, pale in color and coagulates well. The destruction of the blood corpuscles is very remarkable; from 8,000,000 to 9,000,000 in cubic millimetre (normal number) they drop to 1,800,000 or even to 300,000. Hæmoglobinuria is due to this rapid destruction of the corpuscles.

The disease is very fatal. The author records an observation of a herd of 1000 cows and 450 calves, in which 630 adults and 10 young only died.

Smith and Kilborne have shown that Texas fever was due to an endoglobular parasite, the *piroplasma bigeminum*. Mr. Lignières shows that tristeza is due to the same parasite, whatever form it may assume. One single corpuscle may contain one, two, three, or even four piriform or rounded agents. In some cases 30% of the red corpucles are infected; in others, it is difficult to detect the parasite. Along side infected corpucles, giant hematics can be seen containing fine and numerous granulations; these are not of parasitic nature. On the contrary, they are a sure sign of the victory of the diseased organism over the parasite of malaria.

Prof. Lignières has succeeded in detecting the mode of development of the *piroplasma*, in the blood and in the cultures which he has obtained with infected blood in hæmoglobinemic serum. The parasite gives two species of spores: one *active*, which forms very rapidly, and goes to fix itself on sound corpuscles, and produce a new parasite; this spore loses rapidly its properties outside the organism; the other, *passive*, which develops slowly by complete retraction of the protoplasm of the parasite; this is the true resisting form, but is powerless to produce infection without the help of a promoting cause.

Prof. Lignières has succeeded in transmitting experimentally malaria to 127 bovines by intravenous or subcutaneous vaccination of infected blood. All animals other than bovines are refractory.

Smith and Kilborne have proved the part played by the tick (*Syodes bovis* of Riley, *Boöphylus bovis* of Curtice, *Rhypicephalus annutatus* of Say), in the spreading of Texas fever. In Argentina, says Lignières, the presence of malaria coincidates exactly with that of the tick. The author has found the *piroplasma bigeminum* in the bodies of ticks. Yet, a great number of infected ticks, crushed together, have been inoculated under the skin of cattle without producing the disease, while a few of these parasites placed on another steer gave him malaria. Indeed, the *rhypicephalus* contains the virus in the state of passive spores, which by themselves are powerless to produce the disease; in natural contagion, it is the venomous saliva of the tick, deposited in the prick with the passive spore, which insures its growth and afterwards the disease.

No treatment can succeed with that disease; prophylaxy alone can. First of all, attention must be given to the ticks, essential agents of the transmission of the disease; animals must not travel through regions infested by ticks. Animals born in infected regions offer a great resistance to the disease on account of the immunity gained by benignant attacks during the first months of their life. The parasite never does entirely disappear from the organism of animals that have resisted the disease and their presence is not in contradiction to the idea of immunity. Lignières shows that in malaria, the refractory condition is the consequence of successive immunities, which explains its persistency.

Taking into consideration the resistance of young animals, it was thought to expose them to the infection of ticks with the idea of giving them a benignant form of the disease, and thus give them certain immunity to resist another fatal attack. But this method has the objection of often giving a deadly disease to young animals and of creating new centres of tristeza.

Prof. Lignières has then looked for a more practical mode of vaccination. He says: "I have tried to attenuate the virulency of the *piroplasma;* the results that I have obtained so far are not yet perfect, but I am convinced that a vaccine shall be found whose inoculation will transmit the benignant form of the disease."

Since the publication of this excellent book, Prof. Lignières

has kept up his experiments. In a great public experiment made at Buenos Ayres, he has vaccinated bovines with complete success, not only against experimental inoculation of the disease, but also against the natural infection by ticks.

It is the first time vaccination has been used against a disease due to hematozoars. This is an important discovery, which may conduct to a similar application against paludism of man.

Prof. Lignières has done well for science and his country can be proud of him. A. L.

SURGICAL OPERATIONS. By W. Pfeiffer, of the Berlin Veterinary High School, and W. L. Williams, of the New York State Veterinary College. W. R. Jenkins, New York; Ballière, Tindall & Cox, London.

One of the neatest and most useful books that has been contributed to English veterinary literature during recent years has just appeared under the above title. This little book is from the pen of Dr. W. L. Williams, Professor of Surgery in the New York State Veterinary College, Cornell University, Ithaca, N. Y. It is in part translated from a similar work by Dr. W. Pfeiffer, Assistant in the Surgical Clinic of the Veterinary High School, Berlin. A considerable portion of the material is original. Two important new operations are described by the originators.

In some respects the old teaching of operative surgery has been open to criticism. One criticism would be the lack of actual performance of operations by the student. This little book, taken as a text-book and guide for actual work, ought to assist in removing the class room difficulty, and also assist the practitioner in making up what he lost by having been born several years too soon. Dr. Williams has omitted some portions of the original, and has added some material that belongs distinctly to recent American surgery. For instance: McKillip's staphylotomy; Merillat's arytenoideraphy, and Williams' operations for trifacial neurectomy, extraction of molars, repulsion of molars, caudal myectomy, and vaginal ovariectomy.*

The operations described in the book have been divided into four groups: Operations on the head; operations on the neck; operations on the trunk and genital organs; and operations on the extremities. There is no part of the subject matter that is not of the utmost importance; nor could complicated operations be more simply and accurately described. But one method is given for each operation, and confusion is thus avoided. Each method has been selected by a master, and so the inexperienced are safe in operating under this guidance.

* This operation is given in full in the "Department of Surgery" in this issue.

Some things have been omitted that we might wish had been included, but there is nothing that we might wish had been omitted. There are many who can operate, but few who can describe their operations so as to give the description any teaching value. The writers of this little book have demonstrated that they can do both. There are few operations with which the recent graduate has more trouble in actual practice than the extraction of molars; and there is probably no operation so poorly, so unsurgically performed in routine practice as that of molar repulsion. The operation as described by Williams becomes surgical and effective.

An error in translation has resulted in a transposition of levers of the first and second classes as applied to tooth extracting forceps. The illustrations may be justly criticised in some cases. For instance: Fig. 31, illustrating digital neurectomy, shows the incision too far forward. Fig. 28, illustrating the stringhalt operation, suggests an incision that appears rather high. If a student should read the text carelessly and guide his incision by the illustration, he might go through the annular ligament and get into the lateral extensor bursa, which would not be good surgery, although not necessarily serious in result.

Figs. 1 and 2, illustrating extraction of molars, are very instructive and satisfactory. Fig. 4, showing the sites of the various trephining operations, is satisfactory in that it shows where to trephine; but it can hardly be commended as being artistic. The same criticism may be made of Fig. 8, illustrating trifacial neurectomy. Taken all in all, the illustrations are to be praised because they do illustrate, and some of them are artistic.

This little work has been needed for some time, and the American veterinary profession is to be congratulated that so able an operator and teacher as Dr. Williams should have undertaken it.

My impression after going through this little book quite thoroughly can be expressed fairly well by saying: "That is business; that is surgical surgery. We need not be ashamed to invite our surgical M. D. brethren to witness a clinic of that kind." M. H. R.

CATALOGUE OF AGRICULTURAL AND VETERINARY INSTRUMENTS. H. Hauptner, Berlin, N. W.

This new catalogue deserves more than an ordinary mention.

It is a true album where by excellent engravings the most varied instruments are represented as being those most used in all the branches of veterinary medicine, bacteriology, etc. The descriptions of the entire series are given in three languages—German, French and English. The care with which the catalogue is gotten up permits the reader to find in it other than commercial information. It contains many instruments and objects of interest and importance. All the veterinary schools of the whole world are represented by one or several excellent photographs, which give a good idea of the importance and arrangement of each of those establishments. These are accompanied by short sketches relating to the organization of the schools, the faculty, curriculum, etc.

This unique album of 242 pages is profusely illustrated and 25,000 copies printed, which are offered gratuitously to veterinarians. It is published by the house of H. Hauptner, Luisen Strasse 53, Berlin, N. W. A. L.

DR. JAMES MCDONOUGH, of Montclair, N. J., was prevented from attending the meeting of the State Association on account of his father being on his death bed. The entire profession of New Jersey sympathizes with Dr. McDonough in his bereavement. Dr. McDonough rendered valuable aid to Dr. Lowe in effecting the amalgamation and enjoys the respect of every member of the State Association.

IMPROVEMENTS IN THE BUREAU OF ANIMAL INDUSTRY.

The service of the Bureau of Animal Industry is constantly being made more desirable for veterinarians. Beginning with this year a leave of absence of two weeks with pay is allowed each year.

Veterinarians secure appointment at $1200 per annum almost as soon as they have passed the civil-service examination. Those who passed the regular examination in April were all appointed within a few weeks of the time their papers were passed upon. A special examination was held in July, and all who passed that have received appointments. The regular fall examination will be held at various points throughout the country on October 23, and persons desiring to take the same

should make application to the Civil Service Commission at Washington at least two or three weeks in advance of that date.

There are now in the Bureau service 275 veterinarians, and further appointments will be made as soon as the next civil-service examination has been held.

The following promotions have been made since January 1, 1899:

Dr. Louis Abel	New York City	From	$1200	to	$1400
Dr. Harry B. Adair	Kansas City	"	"	"	"
Dr. Leslie J. Allen	Kansas City	"	"	"	"
Dr. O. G. Atherton	Chicago	"	"	"	"
Dr. Lewis R. Baker	Hammond, Ind.	"	$1400	"	$1600
Dr. S. E. Bennett	Kansas City	"	$1600	"	$1800
Dr. Thomas A. Bray	El Paso, Texas	"	$1200	"	$1400
Dr. Lowell Clarke	South Omaha	"	"	"	"
Dr. Louis P. Cook	Cincinnati	"	"	"	"
Dr. S. E. Cosford	Lincoln, Nebr.	"	"	"	"
Dr. E. T. Davison	Leavenworth, Kans.	"	"	"	"
Dr. L. Enos Day	Waterloo, Iowa	"	"	"	"
Dr. F. L. DeWolf	Chicago	"	"	"	"
Dr. George Ditewig	Davenport, Iowa	"	"	"	"
Dr. O. E. Dyson	Chicago	"	$1600	"	$1800
Dr. A. T. Everett	South Omaha	"	$1200	"	$1400
Dr. George C. Faville	Norfolk, Va.	"	$1400	"	$1600
Dr. Nathan K. Fegley	Jersey City	"	$1200	"	$1400
Dr. James Fleming	Chicago	"	"	"	"
Dr. Louis K. Green	Detroit	"	"	"	"
Dr. H. W. Hawley	Chicago	"	"	"	"
Dr. F. W. Hopkins	Cairo, Ill.	"	"	"	"
Dr. U. G. Houck	Chicago	"	"	"	"
Dr. E. N. Hutchinson	Portland, Ore.	"	"	"	"
Dr. G. A. Johnson	Sioux City, Iowa	"	"	"	"
Dr. James Johnston	Boston	"	"	"	"
Dr. Benj. F. Kaupp	Kansas City	"	"	"	"
Dr. Charles Keane	Los Angeles, Cal.	"	"	"	"
Dr. James S. Kelly	Quincy, Ill.	"	"	"	"
Dr. F. D. Ketchum	South St. Paul	"	"	"	"
Dr. R. R. Letts	New York City	"	"	"	"
Dr. A. McBride	Jersey City	"	"	"	"
Dr. Harry G. Moore	South St. Joseph	"	"	"	"
Dr. W. J. Murphy	Brightwood, Mass.	"	"	"	"
Dr. Don W. Patton	South Omaha	"	"	"	"
Dr. A. G. G. Richardson	Boston	"	$1600	"	$2000
Dr. O. W. Snyder	Eau Claire, Wis.	"	$1200	"	$1400
Dr. R. P. Steddom	Washington	"	"	"	"
Dr. Walter J. Stewart	Milwaukee	"	"	"	"
Dr. E. L. Volgenau	New Haven	"	"	"	"
Dr. J. Wilson	South Omaha	"	"	"	"
Dr. Morris Wooden	Chicago	"	$1400	"	$1800
Dr. C. H. Zink	Buffalo	"	$1400	"	$1600

SOCIETY MEETINGS.

AMERICAN VETERINARY MEDICAL ASSOCIATION.

The thirty-seventh annual meeting was called to order at 10.15 A.M., Sept. 4, by President Leonard Pearson, in the large convention hall of the Russell House, Detroit, Mich., in the presence of over two hundred members, visitors and ladies.

President Pearson announced that Hon. Wm. C. Mayberry, Mayor of Detroit, would address the Convention, which he did in a manner that won all hearts, and when he had extended the hospitality of the citizens of the beautiful city which he represents, all felt that they were indeed welcome. His address was full of beautiful thoughts *apropos* to the character of his auditors. He compared the purposes of this gathering—the dissemination of scientific knowledge ; the interchange of medical truths gathered through research or experience—with the methods of a century ago, when any medical secret was carefully guarded for the personal pecuniary advantage of its possessor, whose death usually caused the obliteration of his secret, and the world of medicine was none the better for the discovery. But now the archives were at once sought and there the fact was recorded for the benefit of mankind and the science of medicine, while others are at liberty to take up the subject, more fully develop it and place it back in the records for the common good. He paid a glowing tribute to the work of the late Henry Bergh, and when he had finished the applause was long and loud.

Dr. W. Horace Hoskins, of Philadelphia, was called upon to respond to the Mayor, and he did so in that happy strain that makes him a welcome guest wherever public speaking is a feature. He deprecated the fact that his appearance on the platform with Mayor Mayberry made an unpleasant contrast, since the latter represented a successful Democratic mayoralty candidate, while he stood as an example of a defeated one. But he made some telling points while accepting the Mayor's generous hospitality by notifying him of his wonderful opportunities for good while directing municipal affairs, as the important subject of the purity of food products was ever pressing for solution.

President Pearson then read his annual address, which was listened to with the closest attention. The following is the full text of

THE PRESIDENT'S ADDRESS.

GENTLEMEN:—The past year has been one of great progress in our Association affairs, and in the development of our profession. The schools are receiving more support and are improving. Laboratories for research work in veterinary pathology are being improved and enlarged, and new ones have been established. Under the stimulus of increased demand for their services and higher rewards, the veterinarians of the country have given more attention to their organizations, have strengthened them, and, by co-operation, advanced the status and the conditions governing their calling.

In so far as this applies to our own organization, you will be told more by the Secretary, that vigilant, untiring officer who keeps in touch with all of the details of the work of this international society from year's end to year's end, planning, pleading, prodding, as conditions require, or as instructed by you. The Secretary's office has steadily grown in importance, and is now the great reservoir and mainspring of the official work of this organization. The amount of time and thought required to satisfactorily conduct the affairs of that office and the difficulties experienced in arranging for a meeting such as this, and in keeping up the correspondence with nearly 400 members, can scarcely be appreciated by one who has not undertaken it.

Do we compensate the Secretary sufficiently for the time he must take from his personal work and devote to our business? I believe that this question should be carefully considered.

Our organization is now stronger and its influences are broader and more potent than ever before. We will better appreciate the meaning of this if we recall some of the achievements of this body, as, for example, the success of its efforts in the direction of lengthening the courses of instruction in the veterinary schools. When this matter was taken up a few years ago, but three veterinary colleges in the United States and one in Canada required three years attendance. At this time there are but two colleges in this country and one in Canada that do not require three years attendance, and this out of a total of 16. Moreover, the requirements for entrance are gradually being raised, and students that are better prepared for the study of the veterinary sciences are now being required and received. These great advantages are in part a natural development, but there can be no doubt that they have been encouraged and hastened by this body.

Whatever change of sentiment there may be among the members of Congress and on the part of the public in regard to the proposition to confer the authority and dignity of rank upon veterinarians in the United States Army, is due principally to a few members of this body working as members of special committees. Especial mention should be made of the faithful labors of Dr. D. E. Salmon, and of Dr. R. S. Huidekoper. By the efforts of these gentlemen, aided most valiantly by the members of this Association and the veterinary profession at large, it was possible at the last session of Congress to make a greater advance in the matter of placing veterinary work in the army on a proper basis than has ever been possible before. The bill drafted by your committee has passed the Senate, and has gained friends in the House of Representatives, and has secured the endorsement of the President. It now remains for us to continue to follow the leadership of our Committee on

Army Legislation, to sustain and aid them in the continuation of their difficult work. If they shall fail this year to secure the enactment of this reform that the army needs so sorely, we must not be discouraged, but continue the struggle until the military veterinarians are given commissions and are organized into a compact and serviceable corps with a veterinarian at their head, whose rank is in proportion to the magnitude and importance of the work he is required to control.

I believe that the veterinary profession of the United States is determined to have its due in this matter, and is determined that the army shall have a veterinary equipment that will be a credit to this country. The ancient system now in vogue, that is the source of enormous losses to the tax payers, that lessens the efficiency of the army, and is an insult to the veterinary profession, must be supplanted, no matter how much time and effort are required to do it.

In the publication of veterinary literature, this Association has always taken a prominent and leading part. The oldest veterinary periodical in this country was originally the journal of this Association. During recent years its annual proceedings have constituted most important contributions to our literature. These volumes reflect the thought, the attainments, the ideals and purposes of what is highest and best in our profession. It is fitting, therefore, that they should appear in a form that is commensurate with all they represent.

In the encouragement and development of the public relations of veterinary work, this Association has always taken a foremost position. This will be shown by reference to the resolutions adopted at our annual meetings. These resolutions have come to be looked upon as the authorized voice of the veterinary profession, and it is, therefore, important that they shall always be well considered, conservative and safe.

The papers that have been read at the meetings of this Association, and the discussions that have taken place have had the effect, in large measure, of solidifying and unifying the thought and effort of veterinarians on questions of moment. The methods employed in controlling various infectious diseases, and the organization of State Boards of Veterinary Medical Examiners are instances in point.

The development of knowledge of disease and of effective methods of prevention and cure during the past decade, has been marvelous indeed. It is gratifying to consider that much of this advancement has been the work of comparative pathologists and of veterinarians. It is only quite recently that the advantages that may be derived from the study of comparative pathology in relation to the development of the whole subject of disease, and especially to human diseases, have been recognized. In fact, scarcely any attention was paid to this subject until Bollinger explored the almost virgin field of animal pathology thirty years ago, and Virchow and Birsch-Hirschfeldt also recognized the value of the broadening discipline and the new lights to be derived from the study of the diseases of animals. Attention has been forcibly drawn to this subject by the researches of Johne, Kitt, Smith, Moore and McFadyean. In the realm of bacteriology, students have not drawn sharp lines between genera, and confined their studies to the organisms that attack a single kind of animal. Many bacteriologists, following the example of the great leaders, Pasteur and Koch, have studied the bacterial diseases of useful animals. The idea is gaining ground that disease must be

studied as disease in the broadest sense possible, and not, as heretofore, as a morbid process confined to a part of the body of a single species of animal.

"Comparative pathology" already has a familiar sound and laboratories are being erected or equipped and enlarged to make special provision for this new development. This movement is evident not only in this country, but abroad as well, and notably in Germany. The result of this, it is hoped, will be to throw new light on many of the obscure points in the pathology of the disease of animals and overcome the condition that Johne described in explaining why he did not finish his text-book on pathology that was announced ten years ago. He said, "The pathological institutes in human medicine are filled with young physicians who have sought and found in this field a subject for a thesis or are undertaking advanced work. This results, at least, in the accumulation of a plentiful amount of material that without too much labor can be sifted and worked over. Thus building stones are made from which the master can erect a building. Of this, veterinary pathology has nothing. The teacher of veterinary pathology is not supplied with sufficient help and has scarcely time to attend to the current work of his department, the post-mortems and courses and lectures, if he is thorough in them. There are no positions to strive for or other encouraging conditions to attract young veterinarians to provide building stones for great text-books."

Since these words are true of the conditions in America even more than in Germany, we hail with joy any movement that promises to provide facilities for and to encourage workers in comparative pathology.

It is not at all likely that this development will fail to receive a warm and sympathetic welcome. We must not be content with this betterment, however, nor shall we fall into the error of thinking that this is all of the veterinary sciences. We must not allow the other essential veterinary sciences to be neglected and fail to develop in proportion to their fellows and their own innate importance.

If comparative pathology is taken up by laboratories usually conducted by physicians and principally for the purpose of throwing light on the diseases of man, and if our veterinary teachers must go to this source for their facts, we must allow all of the veterinary sciences to be humanized in the same way and developed as side issues to subjects that are conceived to be more important.

Our veterinary schools and veterinary departments of universities must always stand on independent bases. It will never do for them to become lesser departments incidental to schools of medicine, for example. If any arguments are needed to support this contention they may be found in the vast importance to the nation of the interests that are protected and fostered by the veterinarians and in the histories of veterinary schools in other countries.

First, veterinarians guard the greatest income producing property in the United States. Live stock husbandry is the most profitable branch of our agriculture; it feeds more people and furnishes more homes than any other branch of manufacturing commerce or trade. It furnishes the material for exports amounting to more than $200,000,000 per annum. It represents an investment of more than $2,000,000,000. The success of our agricultural population comprising 58% of the people of the country, depends on their horses, cattle, sheep, swine and poultry more than on any other factors.

Moreover, the butchers, the milk dealers, the creameries, woolen mills, tanneries, shoe factories, hat factories and numberless other smaller interests and industries depend on animals and animal products. The protection and development of such interests as these are worthy of the most earnest attention of statesmen, scientists and educators.

Second. The experiment has been tried in Europe of establishing veterinary chairs in universities and attempting to provide veterinary courses without the complete equipment of a veterinary school. Such experiments at Halle, Leipsic and Giessen have failed. The successful work of investigation and instruction in the veterinary sciences in Europe is done in separate veterinary schools, as at Berlin, Dresden, Hanover, Alfort and Vienna. There are, perhaps, three seeming exceptions to this rule. In Berne, the veterinary school has during the past year been made a department of the University, but its separate plant and faculty are preserved. In Copenhagen and Buda-Pest, the veterinary schools are associated with schools of agriculture, but each has its special equipment and faculty and this union appears to be advantageous to both institutions.—

If the veterinary sciences are dominated by comparative pathology, there is danger that the point of view of the veterinarian will become narrow and that he will not be competent to apply to the best advantage the knowledge of comparative pathology that he possesses. This statement may at first seem paradoxical, but my thought is that it is necessary for a veterinarian to be thoroughly familiar with animals in health before he can treat them successfully *or economically* when they are diseased. It is necessary to know the breeds, values, foods, methods of rearing, using, etc., in order to be in a position to discover and remove causes of diseases or advise appropriate treatment. This idea was illustrated to me by Professor Dieckerhoff, who said of a certain eminent physiologist, a professor in a veterinary school, "He could teach veterinary physiology better if he could ride." That is, if this great scientist had possessed some familiarity with animals, he could have extended and applied his profound knowledge beyond the walls of his laboratory and lecture hall to animals in the stable and pasture. There is as much in the application of principles as in propounding them. It is not enough to have a set of tools, one must know how to use them.

In spite of the prevailing popular impression, the veterinarian is more than a doctor of diseased and maimed beasts. And he is himself responsible for the narrow bounds that circumscribe his field of labor in the popular mind. In this country the title "Doctor" does not commonly convey the impression of a learned man, but to the plain person it signifies one who doctors. Now, veterinarians have insisted upon the title of Doctor, whether conferred upon them by their college or not, and the result has been that veterinarians are commonly regarded as men whose sole business it is to doctor animals, and this is considered the single object and the end of their technical equipment.

In other countries veterinarians do not covet the title of Doctor and it results that they are not regarded as members of the least important branch of a noble profession, but stand on the footing of their own.

Partly on the account of the narrowing effect of a useless title, and partly through failure to realize the importance of the subject, veterinarians have not cultivated to the extent they deserve what might be

called the physiologic phases of animal husbandry. With his knowledge of comparative anatomy, physiology, chemistry, foods and the predisposing and exciting causes of disease, the veterinarian should be the natural expert on conformation, selection for special purposes, breeding, rearing, feeding, etc. He should also be thoroughly informed on stable construction and other practical questions related to the maintenance and utilization of animals.

As expert landscape gardeners, civil engineers and architects are consulted on the problems within their profession; so should veterinarians be consulted on problems relating to all phases of animal husbandry. Before this can occur largely it will be necessary for the public to relinquish the idea that veterinarians are useful only to patch up decrepit animals or to check the spread of disease and be educated to regard them as experts in animal husbandry—as animal engineers.

It is also necessary that our schools shall devote more attention to these subjects. At present our knowledge of many of these things is almost purely empirical; it remains for veterinarians to formulate it and to place it on a scientific basis whence it may advance. Most of the accurate work that has been done in these lines has been done by veterinarians, beginning with the illustrious Bourgelat, but there is an enormous field that is still untouched.

This association can do much to broaden the scope and practise of the veterinarian. It can encourage the reading of papers relating to the subjects that are usually grouped under the title "Animal Husbandry." It can appoint committees to report on special problems coming under this head. It can recommend the amplification, the deepening and broadening of instruction in 200 technical and allied subjects in the veterinary schools. When all of this is done the veterinary profession will be in more direct touch and in closer sympathy with the stockman and cannot fail to be of more service to the live stock industry and to itself profit by these more intimate bonds.

This thought must have been in the minds of those who planned and organized the federal Bureau of Animal Industry. It is fortunate that this bureau is established on broad lines, that it is not the Bureau of Comparative Pathology or the Bureau of Veterinary Police, but that its purpose is to improve the animal industry in every possible way and that its organic law is broad enough to permit this.

In the same way, so far as an individual may, each veterinarian should extend his knowledge and his practise and become an expert in animal engineering.

In dwelling upon this as a legitimate and desirable field effort I have not wished to appear antagonistic to any work the profession or this association may now have in hand. It is all important and should all be strengthened. It is your high duty as the representative body of the veterinary profession of North America—as the Veterinary Senate—to point the way of advance and to strengthen the hands of the laborers in the field.

A recess for five minutes was then taken and the announcement was made by the chair that the privileges of the floor would be granted to all veterinarians, whether members or not.

The calling of the roll was dispensed with and it was decided to obtain the names of those present by means of cards

supplied at the entrance for the registration of each visitor.

The reading of the minutes of the New York meeting was also dispensed with, and reference to them as printed in the proceedings was made.

The first business was the reading of the report of the Executive Committee, held on Monday evening, at 8.30 P.M. There were present at that meeting Dr. Butler (chairman), Drs. Pearson, Brenton, Bell, Lowe, Salmon, Clement and Stewart, while the vacancies caused by the absence of Drs. Ramacciotti, Winchester and Peters were filled by the appointment of Drs. Dunphy, Johnson and McCurdy.

The proposed amendment to the constitution creating two additional vice-presidents was recommended for adoption, and the association sustained the action of the committee.

The trial of Dr. W. E. Wight, of Allegheny, Pa., for violation of the Code of Ethics in having used advertising posters, the Doctor appearing before the committee in his own defense, resulted in a recommendation for expulsion, which was unanimously voted by the association.

Charges were lodged of plagiarism against Dr. G. B. Blackman, of Georgia, and the committee directed the Secretary to notify Dr. B. to appear before it at its next annual meeting and explain the circumstance. The meeting sustained this action.

The charges against Dr A. J. Kline, of violating the Code were held in abeyance as the doctor promised not to repeat the offense of prohibited advertising.

The resignation of Dr. R. R. Dinwiddie, tendered at the last meeting, was withdrawn at the request of the association.

The resignation of Dr. Chas. W. Heitzman, of New Orleans, was accepted, the doctor having engaged in the practice of human medicine.

The proposal to elect to honorary membership Prof. Dr. Theodore Kitt was taken up, the by-laws were suspended and he was elected.

The following applications for membership were examined at the various seatings of the Executive Committee, and at its recommendation they were elected to membership:

NEW MEMBERS ELECTED.

Abele, F., Jr., Quincy, Mass.
Anderson, F. E., Findlay, O.
Beckett, E. C., 549 Albany St., Boston, Mass.
Blattenberg, J. H., Lima, O.

Burneson, J. C., Experiment Station, Wooster, O.
Butler, W. J., Fond du Lac, Wis.
Cass, W. S., 2826 Dayton St., St. Louis, Mo.
Castor, Thos., East Las Vegas, N. M.
Clark, W. G., Marinette, Wis.
Clute, H. P., Marinette, Wis.
Cooley, A. S., 1184 E. Madison Ave., Cleveland, O.
Craig, Robt. A., Experiment Station, Lafayette, Ind.
Crevier, C., 40 Howard St., Detroit, Mich.
Cunningham, A. E., 215 Huntington Ave., Cleveland, O.
Curtis, D. W., Cadillac, Mich.
Davison, D. A., Princeton, Ind.
Ellenberger, W. P., Care of Dr. W. E. Krieder, Wadsworth, O.
Elliot, H. James, Brandon, Man.
Fair, Wm. C., Cleveland, O.
Frothingham, Langdon, 20 Hereford St., Boston, Mass.
Fulstow, Harry, Norwalk, O.
Gay, Carl W., Ithaca, N. Y.
Gibbins, Johnson, 628 Granville St., Vancouver, B. C.
Gohn, H. M., St. John, Mich.
Green, L. Kenneth, Detroit, Mich.
Groves, John Wm., Hamilton, Ont.
Hamilton, Robt., Victoria, B. C.
Hernsheim, Jos. T., Kenosha, Wis.
Hewett, R. W., 2519 Clybourn St., Milwaukee, Wis.
Heyde, Wm. F., 1215 S. Jefferson St., St. Louis, Mo.
Howard, C. H., Calumet, Mich.
Klein, Louis A., 3626 Frankford Ave., Philadelphia, Pa.
Lacock, J. Stewart, Allegheny, Pa.
McCrank, J. A., Plattsburg, N. Y.
McClure, Stewart W., Helena, Mont.
McEachran, Wm., Windsor, Ont.
McFarland, C. M., Care of Cincinnati Abattoir Co., Cincinnati, O.
Miller, C. A., 613 Jackson St., Louisville, Ky.
Morrison, Robt. J., Nat. Stock Yds., 2, St. Louis, Ill.
Myers, Wm. Y., Ft. Wayne, Ind.
Nesom, G. E., Clemson College, S. C.
Nolan, S. A., cor. Dillon and Fifth Sts., Baltimore, Md.
Ruhl, Frederick P., Fairmont, W. Va.
Rushworth, Wm. H., Chicago, Ill.
Schmitt, Chas., Dodgeville, Wis.
Simpson, H. C., Denison, Ia.

Snyder, S. S., Cedarburg, Wis.
Stauffer, Adolf, 19 E. 11th St., Covington, Ky.
Summerfield, Jas. J., Santa Rosa, Cal.
Titus, Harry E., Purdue Univ., Lafayette, Ind.
Torrance, F., Winnipeg, Man.
Van Es, L., Mobile, Ala.
Wake, A. R., Cudahy, Wis.
Yonkerman, D. P., Kalamazoo, Mich.

REPORTS OF COMMITTEES.

The Publication Committee of 1899, through Chairman Williams, made a short but comprehensive report, showing the work performed by it, which report was accepted by the association.

The Army Legislative Committee then submitted its report through Chairman Salmon, which was as follows:

REPORT OF COMMITTEE ON ARMY LEGISLATION.

Mr. President:

Your committee which was appointed to urge suitable legislation for the improvement of the veterinary service in the United States Army and for the recognition of veterinarians in that service as representatives of a learned profession, would respectfully report that they have labored diligently to secure the desired objects and that a satisfactory measure is now pending. It is not necessary to go into details concerning the opposition which has been experienced. The opposition which has been most determined and most difficult to overcome has originated in the very department whose service we have been endeavoring to strengthen and perfect—the one department which would be benefitted by this legislation. The cause of this opposition appears to be principally the old narrow-minded and unAmerican prejudice existing against veterinarians among certain of the Army officers—principally the lieutenants. There is undoubtedly a feeling among this order of gentlemen that when a man becomes a lieutenant he belongs in a class by himself, that he is superior to and made of finer clay than ordinary mortals and subject to contamination if he associates with them on equal terms. He regards himself, like the Chinese sovereign, as the Son of Heaven, to whom all should bow down and render obeisance. He expects to be gazed at from afar, admired, feared, but he cannot endure the idea of equality, familiarity, least of all with veterinarians. According to his philosophy, if one son chooses as his profession the destruction of his fellow-man and in due time becomes a second lieutenant, and another son in the same family chooses as his life work the amelioration of suffering among God's dumb creatures, the latter, though equally refined, equally educated, equally intelligent, is unfit to associate with the former!

This absurd self-conceit, arrogance and bumptiousness, notwithstanding that it has done much to render the army unpopular with the masses of our people, and is doing its part towards preventing an increase commensurate with the development and needs of the country, has

had its influence both in the War Department and in Congress, but can never secure the support of a majority of the representatives of the American people. The importance of an organized and competent veterinary service in the army is becoming more apparent every year, and every time a Senator asserts that a captain knows more about a horse than does a veterinarian, he inspires his listeners to ask mentally if not orally, Why on the same principle does not a captain know more about a man than does a surgeon? Why does he not know more about engineering than does an engineer? This is an age of specialties, and a captain cannot be his own surgeon, his own engineer, his own veterinarian, and at the same time attend to his other duties. This should be self-evident to the least experienced person. Fortunately these petty and antiquated arguments, though repeated *ad nauseam*, have not had much influence in the Halls of Congress. It is no longer the arguments which must be answered; it is the personal appeals which must be counteracted.

A bill has passed the Senate providing for a properly organized veterinary corps which would supply veterinary service for the cavalry, the artillery, the transportation department and the military schools. This bill has gone to the House of Representatives and is now in the Committee on Military Affairs. While the Secretary of War does not favor the legislation establishing a veterinary corps, he has recommended that the veterinarians in the cavalry regiments be given the rank of second lieutenants. This is a distinct advance for the War Department and is extremely encouraging for all who have worked these many years to secure some amelioration of the army veterinarian's condition.

This legislation has therefore reached the critical period. There has never been a time when the conditions were more encouraging for success. There never has been a time when there was a prospect of accomplishing so much. There never has been a time when the same amount of work would be as effective as it will during the next six months.

Your committee created to further the cause of army veterinary legislation, therefore, appeals to this Association and to the veterinary profession throughout the country to make a supreme effort now, while the prospects are so good, and to leave nothing undone which will contribute to success. Every one of the eight thousand veterinarians in the country should feel a personal interest in this legislation. It secures the full recognition of the Government for the veterinary profession. It raises the standard of the veterinary profession in this country to the same level which it has reached in other civilized countries. It provides an army veterinary service of which we may be proud and to which every graduate might aspire with the feeling that he has chosen an honorable and meritorious life work. It perfects our army organization and gives the government animals the same skillful and merciful treatment which has long since been accorded them by other intelligent and humane nations.

This is a part of the great cause for which every true veterinarian has studied and labored, of which he has pondered by day and dreamed at night, for which he has lived and for which he is willing to die. Therefore, let every individual veterinarian say to himself, This is the opportunity of *my* life; *I* will do *personally* everything in my power to secure the success of this effort *in the cause of humanity*, this effort to strengthen

the army of *my country*, this effort to increase the standing and reputation of *my profession*. (Signed) D. E. SALMON.
R. S. HUIDEKOPER,
W. HORACE HOSKINS,
A. W. CLEMENT.

At the close of the chairman's report the Secretary of the committee, Dr. R. S. Huidekoper, gave an exhaustive address bearing upon every phase of the subject, giving a history of the efforts to effect legislation, the difficulties encountered, the successes achieved, and the failures recorded. He pointed out the methods employed by the committee, and the work yet to be done, urging the utmost unity of action, and finishing with a tribute to our friends in Congress who had ever stood by the committee, and who rendered possible the achievements of the two past sessions, and without whose valuable aid but little can be done at the approaching session. At the banquet Dr. Huidekoper added a foot-note by proposing the health of former Secretary Alger, the first Secretary of War to affix his signature and endorsement upon a veterinary bill.

The Committee on Intelligence and Education made a short report through Chairman Baker, who toward its close deprecated the action of a college in good standing in accepting non-graduate students for a term of a month or two with the intention of making them better men, but rendering to each a certificate, which he claimed was framed and made to do duty as a diploma. A lively discussion followed, and it was regretted that there was no representative of the school present to properly explain the matter.

Librarian Williams rendered his annual report, and thought more good could be accomplished by a more general distribution of back reports among the new members.

There were very few State Secretaries present, and many of the absentees did not send in reports. When Illinois was reached, Dr. E. M. Nighbert, of Mount Sterling, came forward with an interesting *résumé* of the year's occurrences. He referred to the workings of the new practice act, showing that 665 had been licensed, of whom 288 only are graduates. In speaking of the prevalence of periodic ophthalmia he endorsed the treatment given by a correspondent of the REVIEW some time since—the injection of dilute iodine into the orbital fossa, which is followed by swelling and a rapid clearing up of the disease.

State Secretary Dunphy rendered a vigorous report for Michigan, in the course of which he roundly scored a veteri-

nary periodical for handicapping the efforts of the members of the profession in their efforts to establish legislation.

When West Virginia was called Dr. Ruhl asked that the Secretary read Dr. Reefer's report, as it contained information of interest, which proved to be the announcement of the organization of a State association, a charter having been secured. There are only ten graduates in the State, but six of these were present at the organization meeting, and a practice act will be asked for at the next session of the Legislature, together with the appointment of a State veterinarian.

Dr. W. L. Williams, of New York, was now called upon, and responded by reading a most interesting and carefully thought-out paper, entitled "Labor, Rest, and Confinement," after which adjournment took place for lunch.

ELECTION OF OFFICERS.

On the reassembling of the convention after luncheon the President announced that the first business on the programme was the election of officers for the ensuing year, and that nominations for President would first be received. Drs. Mitchell, McNeill and Bell were appointed tellers.

Dr. Austin Peters, of Massachusetts, placed in nomination the present occupant of the chair, Dr. Leonard Pearson, and it was seconded by Drs. Hoskins, Huidekoper, and others, claiming that while the one-term rule had been adhered to for some years, they believed the best interests of the association demanded his present retention, principally on account of the status of the Army Bill, with which he was familiar.

Dr. M. H. Reynolds, of Minnesota, placed before the convention the name of Dr. Tait Butler, of Indianapolis, as a tried and true man, who not only deserved the high honor of election to the presidency, but he would add strength to any movement to forward the work of legislation. This nomination was seconded by Drs. Bell, Baker, and others—all paying high tribute to the character and ability of President Pearson, but claiming that the presidency should not be held successively by the same incumbent. There were many men in the membership capable of adorning the position—it was an honor coveted by all—and it should pass on to new hands year after year.

Nominations were now closed, and the tellers began their work, which resulted in the election of Dr. Butler, the vote standing, Butler 37, Pearson, 32.

For Vice-President eight gentlemen were balloted for—the five highest to be declared elected. The result of the balloting

was as follows: S. Brenton, 58; W. H. Dalrymple, 51: J. F. Winchester, 45; F. Torrence, 44; M. E. Knowles, 37; E. M. Ranck, 36; R. C. Moore, 33; W. J. Martin, 26. The first five were declared elected, their seniority to be governed by the number of votes received.

When nominations for Secretary were called for every voter in the hall yelled the name of "Stewart," and he was elected by acclamation, his protests being drowned by the shouts of the members.

The same action was taken in the election of a Treasurer, Dr. Lowe being the only nominee, and the Secretary was instructed to cast the ballot of the association for him.

The President thereupon announced that the election of officers had resulted as follows:

President—Tait Butler, of Indianapolis, Indiana.
Vice-Presidents—S. Brenton, of Detroit, Mich.
W. H. Dalrymple, of Baton Rouge, La.
J. F. Winchester, of Lawrence, Mass.
Fred. Torrence, of Manitoba, Can.
M. E. Knowles, of Helena, Mont.
Secretary—S. Stewart, of Kansas City, Kansas.
Treasurer—Wm. Herbert Lowe, of Paterson, N. J.

READING OF PAPERS.

Following the selection of officers the literary programme was continued by the reading of a paper by Dr. Wm. Herbert Lowe, of New Jersey, entitled "The Relation of Veterinary Medicine to the Public Health," which was a forcible and practical presentation of the well established facts of progressive sanitary medicine.

Dr. M. E. Knowles, of Montana, presented the results of his investigations and discoveries upon "The Psoroptes Communis Equi and Bovis in Montana and Northwest Territory," and it proved to be an interesting addition to our literature upon parasitic diseases.

Dr. Tait Butler, of Indiana, next read a carefully compiled paper on "The Relation of Lymphatics to Meat Inspection."

Dr. G. Ed. Leech, of Wisconsin, presented "Notes on the Tuberculin Test in Wisconsin."

Dr. D. E. Salmon, of Washington, D. C., contributed a vigorous presentation of the subject of "Rabies and Hydrophobia," deducing unmistakable evidence not only of the existence but of the prevalence of the disease in many sections of the coun-

try, giving a detailed account of its presence and extent in the District of Columbia. He also took occasion to reply to recent articles appearing in the *Journal* discrediting the existence of such a disease, or at least minimizing its prevalence, and was replied to by Dr. Hoskins, the editor, who maintained his contention, saying that the numerous deaths recorded are from nervous collapse from fear. It was apparent that the latter stood almost alone in this opinion.

Dr. J. F. Winchester, of Massachusetts, then read the principal sections of an exhaustive paper on "Antiseptic Therapeutics," based upon a large amount of experimentation, and resulting in some important original deductions.

"Practical Antiseptics" was the subject of an able paper by Dr. G. A. Johnson, of Sioux City, Iowa.

"Veterinary Progress in Michigan," by Dr. Wm. Jopling, was a lucid portrayal of the situation in the Wolverine State, giving the details of the struggles for recognition by the Legislature and the obstacles thrown in our pathway by private individuals with axes to grind.

"Spavin, its Etiology and Treatment," brought the subject up to the hour, and when one has read this thorough presentation of the subject by Dr. W. J. Martin, of Kankakee, Ill., he will have a full idea of all that is best upon this practical and persistent lameness of the horse.

"Snakes, Venoms, and Antidotes," was read only by title and referred to the Publication Committee for insertion in the "Proceedings," as its author, Dr. E. M. Ranck, of Philadelphia, thought that as many practical and more important subjects were awaiting discussion, his contribution would be just as valuable as a part of the archives, and could be read at the leisure of the members. He, however, gave a demonstration of his method of removing the venom from deadly reptiles. He brought forth a box with a glass cover, containing a three-foot rattlesnake, which gave signs of his animate nature by keeping up a vigorous rattling whenever disturbed. By means of a wooden rod to the end of which was attached a leather loop, which could be tightened or loosened at will, the head of the snake was lassooed and he was brought forth amidst strenuous efforts on the part of his snakeship to drive his forked tongue into his captor's hand. Being held firmly in the noose, an ordinary glass was pressed against the palate back of the fangs through which the venom is ejected when the bite is made. Then by pressing against the glands which secrete this

poisonous substance, and which are situated just back of the gills, the fluid poured into the glass in a small stream. The doctor likened the apparatus to a hypodermic syringe—the fangs being the needle and the glands the barrel. A few ladies ventured close enough to see the venom dropping into the receptacle, but hastily withdrew as the rattling was heard.

Dr. Austin Peters, of Boston, read a paper on "Obstacles to Enforcing Regulations requiring Tuberculin Test in Interstate Cattle Traffic," based upon his extensive experience as chairman of the Board of Cattle Commissioners of Massachusetts.

Dr. R. R. Dinwiddie, of Arkansas, read a paper on "Experimental Tuberculosis, Human and Bovine, in Domestic Animals," which elicited much interesting and spirited discussion.

The following papers, whose authors where prevented from attending the meeting, were read by title and were referred to the Publication Committee and will be published in the "Proceedings."

"Examining and Licensing of Stallions for Stud Purposes," by Dr. J. I. Gibson, of Iowa.

"Urinalysis in Veterinary Practice," by Dr. Pierre A. Fish, of New York.

"Inoculation against Texas Fever," by Dr. J. W. Connoway, of Missouri.

"Live Stock Vaccines and Serum Therapy," by Dr. W. H. Rushworth, of Illinois.

RESOLUTIONS.

The following resolutions were reported from the Committee on Resolutions, and were unanimously adopted by the Association:

THE ARMY VETERINARIAN.

WHEREAS, The Bill for the establishment of an organized Veterinary Corps in the United States Army which passed the U. S. Senate as "Section 14 of S. 4300," a bill for the efficiency of the Army (known as the Army Reorganization Bill), and is now under consideration by the Military Committee of the House of Representatives, provides for such a service as has been found necessary and exists in the armies of all other civilized countries; and

WHEREAS, Under the system of administration in the U. S. Army an efficient and economical service cannot be had in any other way than that provided for in our bill any more than any business house could employ thirty or fifty workmen effectively without a foreman or superintendent; and

WHEREAS, Any compromise simply of rank, without organization,

will not increase the efficiency of the Army, and will set back the proper recognition of the profession a quarter of a century; and

WHEREAS, The eight thousand veterinarians in the United States to-day represent a profession, and are not to be classed on the pay list with teamsters as part of them are in the U. S. Army under the present system; therefore

WE DEMAND an organized Veterinary Corps as provided for in S. 4300 without change or amendment when this bill passes, or as a part of the first Army Bill which does pass in its place when Congress reconvenes, and we will as a body and as individuals use our best and strongest efforts to secure the passage of said Bill.

THANKS TO DETROIT AND MICHIGAN.

WHEREAS, This, our first meeting in this great Convention City of Detroit, has been marked by an attendance in excess in number of any prior meeting, and

WHEREAS, The excellent work done by the Local Committee of Arrangements, the cordial reception of the chief magistrate of the city, the courtesies of the press, the intense interest of the Michigan State Association members, the kindness of the ladies of Detroit and vicinity, have all contributed much to the pleasure and profit of our meeting; therefore, be it

Resolved, That this Association tender their sincere thanks and express their appreciation of the courtesies extended us, and trust that our meeting in this city may contribute much to the welfare and advancement of the profession in Michigan, Canada, and the Central West.

THE AMALGAMATED ASSOCIATIONS OF NEW JERSEY.

WHEREAS, The American Veterinary Medical Association has learned with much satisfaction and pleasure of the recent amalgamation of the three State Societies of New Jersey into the Veterinary Medical Association of New Jersey, and

WHEREAS, In place of factional discord and weakness, we see, as the result of this amalgamation, unity, harmony and strength in the profession throughout that State; therefore, be it

Resolved, That the congratulations of this Association be extended to the profession of the State of New Jersey and to that indefatigable worker and organizer, Dr. Wm. Herbert Lowe, of this Association, through whose labors this much-to-be-desired end has been accomplished.

DAIRY AND MEAT INSPECTION.

WHEREAS, Cities are now recognizing the importance of dairy and meat inspection as essential to the protection of public health, be it

Resolved, That we commend to their consideration the selection of men specially trained for the execution of the work in order that it may be effective. The veterinarian, by his training and his knowledge of animals in health and disease, is preëminently better qualified for these positions than any other class of people. We would also commend the adoption of the rules and regulations of the Bureau of Animal Industry pertaining to meat inspection as far as they are applicable to the conditions.

VETERINARY EDUCATION.

WHEREAS, The ability of the veterinarian to promote the health of

the public and of the animals entrusted to his care can be increased only by his more thorough education; therefore, be it

Resolved, That we believe that those entrusted with the management of the veterinary schools of America should put forth every possible effort to lengthen the period of instruction required for graduation, to strengthen and make uniform the curriculum, and to elevate the standard of matriculation examinations.

EXPERIMENT STATIONS.

WHEREAS, We believe that the time has arrived in the history of our profession and in the history of our stock breeding industry when the experiment stations of our various States and territories should undertake the work of research in regard to the physiology and diseases of domestic animals in a more comprehensive manner than has yet been done; therefore, be it

Resolved, That this Association recommend to the governing boards of the various stations that they give this branch of station work more liberal support.

OBITUARY.

WHEREAS, It has pleased Almighty God to remove from our midst our esteemed colleagues,

Drs. M. J. Tewey and Charles A. Mackey, of New York; E. M. Heath, of Connecticut, and Maurice O'Connell, of Massachusetts; therefore, be it

Resolved, That this Association express its sincere regrets and extend to their families our sincere sympathy in their great loss; and, be it further

Resolved, That these resolutions be spread upon the minutes and a copy sent to the bereaved families.

At the conclusion of the reading and discussion of papers the newly elected officers were conducted to the platform and the various offices were formally turned over to them, all of those who were present pledging their earnest endeavors to work for the success of the organization.

President Butler then announced his committee appointments for the ensuing year as follows:

COMMITTEES FOR 1900–1901.

Executive.—Roscoe R. Bell (chairman), Seventh Ave. and Union Street, Brooklyn, N. Y.; D. E. Salmon, Washington, D. C.; G. A. Johnson, Sioux City, Iowa; W. L. Williams, Ithaca, N. Y.; M. H. Reynolds, St. Anthony Park, Minn.; W. Horace Hoskins, Philadelphia, Pa.; C. A. Cary, Auburn, Ala., and the officers *ex officio*.

Finance.—R. C. Moore (chairman), Kansas City, Mo.; Wm. Dougherty, Baltimore, Md.; A. H. Baker, Chicago, Ill.

Publication.—M. H. Reynolds (chairman), St. Anthony Park, Minn.; Roscoe R. Bell, Brooklyn, N. Y.; John J. Repp, Ames, Iowa; J. R. Mitchell, Evansville, Ind.; R. P. Lyman, Hartford, Conn.

Intelligence and Education.—M. E. Knowles (chairman), Helena, Mont.; T. Bent Cotton, Mt. Vernon, Ohio; W. J. Hinman, Winnepeg, Manitoba; Wm. Jopling, Owasso, Mich.; E. B. Ackerman, Brooklyn, N. Y.

Diseases.—Leonard Pearson (chairman), Philadelphia, Pa.; Walter Shaw, Dayton, Ohio; A. T. Peters, Lincoln, Neb.; Langdon Frothingham, Boston, Mass.; R. R. Dunwiddie, Fayetteville, Ark.

Army Legislation.—D. E. Salmon (chairman), Washington, D. C.; Leonard Pearson, Philadelphia, Pa.; A. W. Clement, Baltimore, Md.; R. S. Huidekoper, Washington, D. C.; Wm. Herbert Lowe, Paterson, N. J.

Resolutions.—C. A. Cary (chairman), Auburn, Ala.; G. W. Dunphy, Quincy, Mich.; W. H. Dalrymple, Baton Rouge, La.; G. R. White, Nashville, Tenn.; Austin Peters, Jamaica Plain, Mass.

At the assembling of the convention at 10.30 A. M. Thursday, the room was well filled with members and visitors.

The reports of the Executive Committee at its sessions of Wednesday afternoon and Thursday morning were taken up and its recommendations were acted upon as follows:

The application for membership of Dr. A. W. Hartwig, of Watertown, Wis., was rejected on the ground that his college term had not fulfilled the requirements of the association.

A number of other applications were considered, all being elected and their names will be found among the long list printed elsewhere.

The resignation of Prof. A. Liautard was received, together with a letter embodying his reasons for tendering it. It was accepted, the rules were suspended and he was unanimously elected an honorary member.

The proposed amendment to the constitution and by-laws, which contemplated lowering the requirements for admission into the association, brought forth considerable discussion, and was defeated without a friend to mourn its end.

An appropriation of $250 was voted to the Committee on Army Legislation, and a resolution governing the expenditures of the Resident State Secretaries was passed; while the Secretary had his salary raised to $300 per year.

THOSE WHO WERE THERE.

The following list of those in attendance is probably not complete, but represents those who registered at the entrance to the hall. For instance, we met a number of gentlemen whose names do not appear in the official list.

Members.—Francis Abele, Quincy, Mass.; E. B. Ackerman, Brooklyn, N. Y.; F. E. Anderson, Findlay, Ohio; A. H. Baker, Chicago, Ill.; E. E. Beckett, Boston, Mass.; Tait Butler, Indianapolis, Ind.; Roscoe R. Bell, Brooklyn, N. Y.; A. W. Bitting, Lafayette, Ind.; Eugene Burget, Cleveland, Ohio; J. C. Burneson, Wooster, Ohio; S. Brenton, Detroit, Mich.; Geo. W. Bell, Kingston, Ont.; J. H. Blattenburg, Lima, Ohio; Albert E. Cunningham, Cleveland, Ohio; A. W. Clement, Baltimore, Md.; D. W. Curtis, Detroit, Mich.; H. P. Clute, Marinette, Wis.; W. E. Clemons, Greenville, Ohio; A. S. Cooley, Cleveland, Ohio; W. S. Cass, St. Louis, Mo.; T. Bent Cotton, Mt. Vernon, Ohio; R. A. Craig, Lafayette, Ind.; W. H. Dodge, Leominster, Mass.; D. A. Davison, Princeton, Ind.; G. W. Dunphy, Quincy, Mich.; R. R. Dinwiddie, Fayetteville, Ark.; Wm. Dougherty, Baltimore, Md.; J. T. Elliott, Detroit, Mich.; H. Fulstow, Norwalk, Ohio; Langdon Frothingham, Boston, Mass.; W. C. Fair, Cleveland, Ohio; John W. Graves, Hamilton, Ont.; L. K. Green, Detroit, Mich.; H. M. Gohn, St. Johns, Mich.; J. Hawkins, Detroit, Mich.; W. Horace Hoskins, Philadelphia, Pa.; R. S. Huidekoper, Washington, D. C.; W. F. Heyde, St. Louis, Mo.; W. A. Heck, Moquekota, Ia.; W. S. Hamilton, Chelsea, Mich.; G. A. Johnson, Sioux City, Ia.; Wm. Jopling, Owosso, Mich.; J. W. Jameson, Paris, Ky.; Wm. Henry Kelly, Albany, N. Y.; M. E. Knowles, Helena, Mont.; J. Stewart Lacock, Alleghany, Pa.; Wm. Herbert Lowe, Paterson, N. J.; G. Ed. Leech, Milwaukee, Wis.; Wm. McEachran, Windsor, Ont.; C. A. Miller, Louisville, Ky.; R. J. Morrison, Detroit, Mich.; Frank C. McCurdy, St. Joseph, Mo.; J. R. Mitchell, Evansville, Ind.; R. C. Moore, Kansas City, Mo.; W. J. Martin, Kankakee, Ill.; Wm. F. Myers, Fort Wayne, Ind.; J. C. McNeil, Pittsburg, Pa.; E. M. Nighbert, Mt. Sterling, Ill.; J. D. Nighbert, Pittsfield, Ill.; C. E. Porter, New Castle, Pa.; Leonard Pearson, Philadelphia, Pa.; J. M. Phillips, St. Louis, Mo.; Austin Peters, Boston, Mass.; Wm. H. Rushworth, Chicago, Ill.; Wm. H. Richards, Emporia, Kansas; Jno. J. Repp, Ames, Iowa; M. H. Reynolds, St. Anthony Park, Minn.; Frederick P. Ruhl, Fairmont, W. Va.; James Robertson, Chicago, Ill.; E. M. Ranck, Philadelphia, Pa.; L. N. Reefer, Wheeling, W. Va.; James L. Robertson, New York City; V. Schaefer, Tekama, Neb.; Edgar H. Shepard, Cleveland, Ohio; S. Stewart, Kansas City, Mo.; A. J. Savage, Colorado Springs, Col.; Walter Shaw, Dayton, Ohio; D. E. Salmon, Washington, D. C.; R. V. Smith, Frederick City, Md.; Charles Schmidt, Dodgeville, Wis.; S. S. Snyder, Cedarburg,

Wis.; N. I. Stringer, Eureka, Ill.; H. E. Titus, Lafayette, Md.; W. J. Tomlinson, Williamsport, Pa.; Fred. Torrence, Winnipeg, Manitoba; W. L. Williams, Ithaca, N. Y.; J. F. Winchester, Lawrence, Mass.; A. W. Wier, Greenville, Pa.; Geo. R. White, Nashville, Tenn.; A. Youngberg, Lake Park, Minn; D. P. Yonkerman, Kalamazoo, Mich. (90)

Visiting Veterinarians.—W. J. Armour, Goshen, Ind.; Judson Black, Richmond, Mich.; — Baldock, Birmingham, Mich.; U. S. G. Beaver, Klutztown, Pa.; F. M. Blatchford, Brighton, Mich.; W. S. Birben, Kingston, Pa.; J. W. Brodie, Pontiac, Mich.; G. W. Buckner, Bluffton, Ind.; S. E. Bouller, Niagara Falls, Ont.; H. L. Bollinger, Plainwell, Mich.; C. E. Brownback, Penn, Ind.; L. A. Brown, Aylmer, Ont.; H. B. Baker, Detroit, Mich.; H. B. Bascer, Lansing, Mich.; J. B. Caughey, Columbus, O.; H. T. Carpenter, Ada, O.; J. C. Callender, Parkersburg, W. Va.; S. R. Craver, Youngstown, O.; A. Cornell, Elkton, Mich.; G. H. Carter, Saginaw, Mich.; D. Cummings, Port Huron, Mich.; A. Campbell, Jackson, Mich.; E. H. Callander, Zanesville, O.; M. R. Carr, Kirkton, Ont.; W. F. Derr, Wooster, O.; J. A. Dell, Ann Arbor, Ind.; J. F. Deadman, Sault Ste. Marie, Mich.; D. S. DeWolf, Hart, Mich.; B. A. Dillahunt, Springfield, Ohio; C. F. Dawson, Detroit, Mich.; W. H. Kerr, Mansfield, Ohio; T. G. Kuff, St. Louis, Mich.; H. Emery, Pittsburgh, Pa.; E. W. Emery, Greenfield, Ohio; Chas. E. Edwards, St. Thomas, Ont.; Wm. Elliott, Hickory Corner, Mich.; J. E. Foster, Coshocton, Ohio; J. D. Fair, Berlin, Ohio; Geo. Fitchett, Mich.; Thomas Farmer, Grand Bloc, Mich.; E. T. Frank, Warren, Minn.; B. M. Freed, Sharon, Pa.; S. N. Fitch, Auburn, Ind.; — Frederick, Columbus, Ohio; W. A. Giffin, Detroit, Mich.; F. G. Gilbank, Detroit, Mich.; L. A. Griener, Indianapolis, Ind.; W. H. Gribble, Washington C. H., Ohio; W. R. Granger, Plymouth, Mich.; J. S. Grant, Portland, Mich.; H. M. Gillian, Mason City, Iowa; L. D. Gilson, Adrian, Mich.; C. S. Hess, Wabash, Ind.; R. C. Hill, West Alexandria, Ohio; W. C. Holden, Delphos, Ohio; A. H. Hartwig, Watertown, Wis.; C. H. Howard, Calumet, Mich.; B. E. Hunt, Alma, Mich.; John Hooker, New Baltimore, Mich.; Jas. J. Joy, Detroit, Mich.; Thomas E. Jones, Newark, Ohio; R. H. Kestell, Ypsilanti, Mich.; J. W. Klotz, Nobleville, Ind.; W. E. Krenler, Wadsworth, Ohio; Alex. McGregor, Rockport, Ohio; A. McKercher, Lansing, Mich.; W. A. Meredith, Corry, Pa.; Thomas Meredith, Jameston, N. Y.; S. A. Myers, Wilmington, Ohio; Wallace McQueen, Oxford,

Mich.; F. W. Menhennett, Ishpeming, Mich.; F. McCoy, Chicago, Ill.; R. W. McCally, New York City; A. E. Metzger, Clyde, Ohio; Geo. C. Moody, Mason, Mich.; W. O. McHugh, Toledo, Ohio; W. R. McMurty, Janesville, Mich.; E. D. McQueen, Lowell, Mich.; R. W. McDonald, Flint, Mich.; —— McClain, Jeromeville, Ohio; J. T. Nattress, Delbran, Ill.; Chas. W. Nye, Coopersville, Ohio; M. C. Newburg, Hanover, Mich.; John V. Newton, Toledo, Ohio; C. L. Osgood, Samaria, Mich.; H. F. Palmer, Detroit, Mich.; A. J. Payne, Cincinnati, Ohio; S. A. Pinte, Lexington, Ky.; A. Roberts, Waukesha, Wis.; J. C. Rodger, Anderson, Ind.; M. Rectenwald, Pittsburgh, Pa.; Wm. Rose, Grand Rapids, Mich.; C. Rowland Simpson, Somerville, Mass.; C. C. Stevens, Yale, Mich.; C. S. Shier, Detroit, Mich.; W. M. Simpson, Malden, Mass.; H. S. Smith, Albion, Mich.; C. N. Stowe, Saginaw, Mich.; R. N. Steele, Chicago, Ill.; D. King Smith, Toronto, Ont.; S. S. Treadwell, Englewood, N. J.; W. J. Torrence, Cleveland, Ohio; W. H. Turner, North Amherst, Ohio; J. H. Tennent, London, Ont.; —— Farmer, Ashtabula, Ohio; A. G. Tegg, Rochester, N. Y.; Thos. Thacke, Renfrew, Ont.; John Vhay, Detroit, Mich.; Z. Veldhius, Tremont, Mich.; V. C. Vaughan, Ann Arbor, Mich.; F. C. Wells, Warren, Mich.; J. C. Whitney, Hillsdale, Mich.; W. E. Wight, Allegheny, Pa.; Geo. Waddle, Hastings, Mich.; W. J. Williams, Franklin, Ind.; Wm. M. Wilson, Hartstown, Pa.; Geo. A. Waterman, Lansing, Mich.; J. E. Ward, Perry, Mich.: P. W. Woolly, Lapeer, Mich.; I. A. Wynn, Kenton, Mich.; C. A. Waldron, Tecumseh, Mich.; R. W. Whitehead, Youngstown, Ohio; H. C. Wann, Charlovoir, Minn. (124)

Lady Visitors.—Mrs. E. B. Ackerman, Brooklyn, N. Y.; Miss Lillian Brenton, Detroit, Mich.; Mesdames S. Brenton, Detroit, Mich.; W. S. Brown, Pennsylvania; A. H. Baker, Chicago, Ill.; J. C. Burneson, Wooster, Ohio; Geo. W. Bell, Kingston; Cheesbrough, Detroit, Mich.; Cowing, Detroit, Mich.; H. T. Carpenter, Ada, Ohio; D. W. Curtiss, Cadillac, Mich.; F. A. Cooley, Cleveland, Ohio; A. Campbell, Jackson, Mich.; J. A. Dell, Ann Arbor, Mich.; W. F. Derr, Wooster, Ohio; D. A. Davison, Princeton, Ind.; G. W. Durphy, Quincy, Mich.; H. Emery, Pittsburgh, Pa.; J. D. Fair, Berlin, Ohio; W. A. Giffen, Detroit, Mich.; Miss Ella Gribble, Washington C. H., Ohio; Mesdames Guerney, Detroit, Mich.; W. A. Heck, Iowa; W. H. Hoskins, Philadelphia, Pa.; A. H. Hartwig, Watertown, Wis.; T. B. Hillock, Columbus, Ohio; G. A. Johnson, Sioux

City, Ia.; W. H. Kelly, Albany, N. Y.; G. E. Leech, Milwaukee, Wis.; Miss J. Meredith, Jamestown, N. Y.; Mesdames Wm. McEachran, Windsor, Ont.; J. R. Mitchell, Evansville, Ind.; E. D. McQueen, Lowell, Mich.; A. E. Metzger, Clyde, Ohio; A. Roberts, Waukesha, Wis.; F. P. Ruhl, Fairmont, W. Va.; E. H. Shepard, Cleveland, Ohio; S. Stewart, Kansas City, Mo.; C. R. Simpson, Summerville, Mass.; W. H. Turner, North Amherst, Ohio; J. H. Tennent, London, Ont.; J. C. Whitney, Hillsdale, Mich.; R. A. Walster, West Eaton, Mass.; W. J. Williams, Franklin, Ind.; W. E. Wight, Allegheny, Pa.; A. W. Weir, Greenville, Pa.; John Vhay, Detroit, Mich. (48)

Others Present.—W. W. Dixon, New York City; Alex. Eger, Chicago, Ill.; L. D. Watkins, Manchester, Mich.; A. H. Zenner, Detroit, Mich. (4)

A. V. M. A. NOTES.

Fifty-eight new members emphasize the growing character of the association.

Less than one dozen were dropped from the roll through delinquency.

There were numerous displays of instruments at the headquarters and at the clinics.

Never were guests more royally entertained than were the veterinarians by the Michiganders.

Members who have attended meetings for more than twenty years, say that Detroit's convention was—all in all—the best yet held.

Those who were expecting a mortal combat between two prominent members were doomed to disappointment. It looked as though one was afraid and the other didn't dare.

An innovation occurred at the Russell House. The *ménu* card was embellished by a good photo of some officer of the association, changing the face at each meal.

Dr. Lowe's paper was taken up by the Detroit newspapers and favorably commented upon, urging its applicability to the conditions of the milk supply of Detroit.

Dr. Eugene Burget, formerly the business partner of James L. Robertson, of New York, is living upon his farm near Cleveland, Ohio. Both he and Dr. R. were in attendance, and neither missed a trick.

Visitors to the clinics were enthusiastic in commenting upon Dr. Brenton's sanitarium, in West Alexandrine Avenue, in the rear of his beautiful residence. With such perfect fa-

cilities his practice must be both profitable and pleasurable.

A composite picture was made of the *personnel* of the convention upon a raised platform alongside the hotel. Two ladies who were omitted from the group threatened to break the negative, so that a new sitting would be necessary.

Secretary Stewart had a $100 boost to his salary. With such incessant and conscientious work as he bestows upon the association's affairs, $500 would be nearer an equitable compensation; and yet some secretaries would be dear at $100.

The great establishment of Parke, Davis & Co., was a revelation to the visitors. The workings of the vast laboratory riveted attention, and days could have been profitably spent in examining the processes instead of a few hours.

Mr. W. W. Dixon, representing the firm of E. R. Squibb & Son, of Brooklyn and New York, was actively working in the interests of acetic acid fluid extracts and compound alum powder.

The Army Committee captured a Congressman at the hotel on the last day of the session, brought him to the platform, where a speech was delivered pledging his best efforts to promote the pending bill. He was the Hon. Mr. Wicks, of Michigan.

The geographical distribution of the Vice-Presidents could not have been better arranged if they had been purposely selected from the various sections of the country—one from Michigan, one from Louisiana, one from Massachusetts, another from Montana, and the fifth from Canada.

Toastmaster Salmon introduced speaker Hoskins to reply to the subject of "The Veterinarian in Politics" by administering a witty "roast" to the late candidate for Mayor of Philadelphia. The latter, however, replied so forcefully that the house was brought down in a storm of laughter and applause.

Dr. D. K. Smith, of the Ontario Veterinary College, displayed a dozen colored photographs of frozen anatomy; that is, the cadaver was placed in the open air and allowed to freeze, when longitudinal and cross sections were made at various points and photographs taken, afterwards being colored and labelled—making an interesting and instructive series.

Treasurer Lowe introduced a motion to have himself placed under $2000 bonds. He did not have a fear that he would abscond, but thought the association should be protected; that if a new treasurer were to be elected it would then be indelicate to make such a proposition; but it could be properly done at

this time, he being the author of the movement and the individual affected.

Drs. Salmon and Bell left Detroit early Friday morning and missed every train with which they were to connect, finally arriving in Washington in condition for the laundry and hospital. Dr. E. B. Ackerman and wife, of Brooklyn, N. Y., returned via Buffalo, Niagara Falls, Toronto and Ithaca, where they attended the New York State meeting.

Dr. M. E. Knowles, of Montana, was early on hand and insistent that the association should come to Helena in 1902, promising a Yellowstone Park trip, an excursion to Bitter Root Stock Farm, and other delightful diversions. His rendition of "Mr. Dooley" at the banquet was so true a dialect that there is danger of losing him to the stage.

An enterprising disinfectant agent gave to each veterinarian what appeared to be a half-pint sample bottle of his drug, enclosed in a neat box, with a *fac-simile* of his commercial label on each bottle. Those who discarded their samples regretted their hasty action when they discovered that the fluid was really Hancock whiskey, guaranteed by a rear label to be ten years old and the best.

There was only one class of arrangements which did not work satisfactorily, and that was the clinics. The members were hungry for them, and the committee had worked faithfully to have their arrangements perfect, but events conspired to defeat their plans. The REVIEW will take up this subject and discuss it a little later with the object of having them more perfect another year.

When the printer of the *ménu* of the banquet dubbed the Hon. L. R. Watkins a "Doctor," the latter felicitously referred to the circumstance by saying: "When I was but a young man I had the ambition to some day become the Governor of the Wolverine State; later I even aspired to the Presidency of this great nation; but never, in my wildest dreams, did I ever hope to become a veterinary surgeon. That you have seen fit to place upon me that truly distinguished title I accept it as the acme of human ambition."

In summing up the status of the veterinary colleges of America, Chairman Baker, of the Committee on Intelligence and Education, failed to include the school at Nashville, which so incensed Dr. G. R. White, of that city, as to cause him to rise to his feet repeatedly in defense of his section. He said that there were no veterinarians in the faculty and he was not

sure that any instructions were given, but it was there, and he did not want it ignored.

The Michigan Association entertained the visitors, including the ladies, with a delightful steamer ride up the St. Claire flats, where a fish-and-frog supper was served. It was a happy event, permitting of charming social diversions, the enjoyment of entrancing scenery and a luscious repast, the guests returning to the city at 8.30 P.M., feeling that their hosts had been generous and untiring in their efforts, and had succeeded most admirably.

An exhibition of rapidity and dexterity was given by Dr. W. J. Torrence, of Columbus, Ohio, at Thursday's clinic. With a simple scalpel and a butcher's skewer he performed high plantar neurectomy upon a fifteen-hand gelding in one minute and fifty-eight seconds (1:58), which included the turning of the animal at different angles so that all might see the procedure. The inside operation was completed in 30 seconds. The incision was three-eighths of an inch long, and one inch of the nerve was excised.

The banquet was a perfect success. Three long tables and a cross table, artistically decorated with beautiful flowers, with flags and bunting arranged in artistic festoons, made an ideal banquet hall. More guests sat down to this splendid repast than on any similar occasion, and there was unalloyed enjoyment throughout the evening. The music was of the popular order, and elicited continuous applause—"The Holy City" being rendered three times in response to vigorous *encores*. When the feast was completed the felicitous toastmaster, Dr. Salmon, introduced his speakers in the most entertaining manner, and the responses were in every case well delivered and happy in conception. The following is a list of the toasts and their sponsors: "State Sanitary Work," Dr. H. B. Baker; "Our Relation with Agriculturists," Hon. L. D. Watkins; "Army Legislation," Dr. R. S. Huidekoper; "Our Local Committee," Dr. G. W. Dunphy; "Our Officers," Dr. S. Stewart; "Our Sphere in Politics," Dr. W. Horace Hoskins; "Our Guests," Dr. Leonard Pearson; "Our Canadian Confrères," Dr. D. K. Smith; "State Veterinary Sanitary Work," Dr. M. H. Reynolds; "Our Profession," Dr. James L. Robertson; "Amalgamated Associations of New Jersey," Dr. Wm. Herbert Lowe; "Mr. Dooley," Dr. M. E. Knowles.

THE Veterinarian who does not read the REVIEW is to be pitied.

NEW YORK STATE VETERINARY MEDICAL SOCIETY.

The tenth annual meeting of this society convened in the large lecture amphitheatre of the New York State Veterinary College, at Ithaca, on Wednesday, Sept. 12, at 11 A. M., President Roscoe R. Bell in the chair and Secretary Claude D. Morris recording, with about one hundred members of the profession and a goodly number of ladies in attendance. The President called the meeting to order, and introduced the Hon. J. G. Schurman, President of Cornell University, who welcomed the convention to Cornell and Ithaca in a splendid address, in which he paid a high tribute to modern veterinary medicine and the character of the men engaged in its practice and teaching. Everyone felt the influence of his encouraging words, which were received with prolonged applause.

President Bell responded to the welcoming address, assuring Mr. Schurman and the Ithacans that their warm words were appreciated and returned with great heartiness.

At the conclusion of these formal ceremonies,

THE PRESIDENT'S ANNUAL ADDRESS

was then read, as follows:

"We have much cause for congratulation that the whole-souled invitation of the Ithacans to hold our meeting here this year was accepted, for never has our association met amidst such magnificent surroundings, with such bewitching and picturesque scenery, or with more generous hospitality. It is a great privilege to visit this magnificent seat of learning, which stands as an everlasting testimonial to civilization and the glory of this commonwealth. To wander over the great green campus, through the halls and amphitheatres of the university, and to ponder upon the vast facilities for instruction enjoyed by the young men of the generation, is a revelation to most of us and a sign of hope that those who are to follow us will have greater opportunities to solve the problems of science than were vouchsafed to us and to our day. But we will be particularly interested in the School of Veterinary Medicine, for it has taken a high type of education for its standard, and the members of its faculty are men of national reputation, and I am glad to say that we have the honor of numbering the most of them as among our most valuable and active members. Those of the faculty who are ineligible through lack of a strictly veterinary degree have made themselves very welcome through their works in comparative medicine, and at our last

meeting we were pleased to honor them and ourselves by placing their names upon our roll of honorary membership.

"Under such brilliant auspices as these the tenth annual meeting of this society is inaugurated, and the doors are thrown open for the transaction of all business that may properly come before it. I trust it may be harmonious and one long to be remembered for the good it shall accomplish for veterinary science and in the awakening of an interest in our society that shall mark the birth of a new era in the history of associational work in the Empire State.

"When at our last annual meeting you conferred upon me the very high honor of making me your President for two years I at once felt that a great responsibility went with that election, and time has simply intensified that conviction. In consequence, I have watched with jealous eyes events that have been transpiring throughout the veterinary world, and especially have I endeavored to study the problems that have been presented in the nation and state, that I might at this time bring before this convention the facts and impressions that I have gathered, so that we might look upon the situation in a calm and careful manner, and by intelligent consideration gain something that will inure to the advantage and advancement of our calling.

"In the first place, as a result of stimulated observation, I bring you tidings of general professional prosperity throughout the country. The commercial and financial depression which held the nation in a firm grasp for the last seven years of the nineteenth century, dragging all industrial interests down with it, has given place to an era of good times, when all businesses are active, with capital seeking and finding profitable employment, anxiety being dispelled, and a feeling of confidence everywhere being established. As a consequence, purse strings are loosened, the people are beginning to seek pleasures and pastimes, and as a matter of history and of fact the horse enters more keenly into the pleasures and sports of people than any other single object. It appears now, after tantalizing men with such illusive, expensive, and unsatisfactory side-shows as auto, loco, moto, and other fashions of cycles, that they approach the horse with a stronger affection and renewed zest, for he is bringing more solid dollars in the open market than ever was recorded in the history of the world. When yearlings fetch $50,000 and adults $187,000 it may fairly be assumed that his decadence has not yet really begun, and if he is to exist only as an adornment of the museums of natural history, as has been

claimed by a few enthusiastic automobile newspapers, he will form a rather expensive specimen. The higher he goes in value the more profitable becomes the vocation of the veterinary surgeon; so that we can afford to watch his upward bounds with complete complacency. When horses were selling for from $50 to $75 it was a questionable proposition whether more than two or three visits could be made upon such a patient at one disability; but when the same horse advances to $150 or $200, his owner will be glad to employ skilled assistance in order to have his valuable property returned to a condition of usefulness. This is but one element conspiring to the betterment of veterinary science. Better men have inspired greater confidence in the people; better results from medical treatment have encouraged them to more frequently seek advice and help from the veterinarian, and a higher education along humanitarian lines has taught people to more seriously regard the dumb animals dependent upon them when sick or disabled. All of these circumstances result not only in financial profit to the veterinarian, but give to his calling honor and the respect of his fellow men.

"The State of New York has a greater veterinary population than any other. It is the pioneer in veterinary education and legislation, and there is no good reason why it should not continue to be the leader in every advancing movement in this country.

"There is absolutely but one channel through which reforms can be accomplished, and our interests safeguarded, and that is the veterinary association. The literature of a profession may point out danger signals and opportunities for advancement, but it requires an association to take hold and do the work. One man will see an abuse and rail at it, possibly make a spasmodic effort to correct it; but he has neither the time nor the ability to persevere long enough to accomplish any real good. A better example could not be found of the truth of this than the history of the efforts to effect legislation to place the army veterinarian upon a higher plane. Concerted attacks all over the country supporting the active exertions of the Committee on Army Legislation of the American Veterinary Medical Association have year after year gained a little until the last session of Congress all but gave us the coveted prize. Beginning with the opening of the next session the thread will be taken up just where it was left off—the same activity of the committee, the same pressure of individual members upon their representa-

tives in Congress—and it will be a miracle if we do not succeed in our long struggle.

"So it is in this State. A bill is introduced in the Assembly, which if it became a law, would destroy the legal foundation of our profession. Our watchful Judiciary Committee, ever on the alert for just such efforts, sounds the alarm, which is taken up by the active members of the society throughout the State and such an avalanche of protests pours into the committee having the bill in charge that it never emerges from the committee room. The whole profession of the State is thus protected and benefitted by the society of which you are members. How could adequate protection from iniquitous legislation be secured by any other means? How can veterinarians withhold their support from an organization doing such work in their behalf year after year?

"It is illustrative of the power for good which can be exerted by such an association. It is estimated by such a careful statistician as our worthy Secretary that the State of New York contains 800 graduate veterinarians and 1500 non-graduates. As only the former are eligible to membership in this society, it leaves us with a possible membership of 800. Now, when we contemplate the great influence wielded by this association, and the large amount of work performed by it in its short history, with less than 100 members, only a small proportion of which are really active, it may be imagined what grand good could be done had we upon our rolls the number that should be there—all working as one harmonious band for the best interests of our profession and our commonwealth—the pursuit of knowledge, the elevation of our profession, the preservation of the health and wealth of the State by the intelligent guardianship of its herds and flocks against the ravages of contagious diseases, the protection of the legitimate practitioners and the public against unqualified competition, and the cementing of friendships by pleasant social intercourse.

"This society was organized at Rochester on January 15, 1890, with 27 members. The following year we were incorporated by act of the legislature, since which date we have elected 104 to membership, making a total of 131. Of this number 28 have been suspended for delinquency of dues, 3 have been dropped for breach of the Code of Ethics, 4 have resigned, and 5 have died—leaving upon our rolls to-day 91 members. Nine annual meetings have been held. In 1890 at Rochester (the organization meeting), 1891, 1892, 1893, at Syracuse, 1894

at Albany, 1895 at New York City, 1896 at Buffalo, 1897 at Syracuse, 1898 and 1899 at New York City, and this year at Ithaca. Up to 1894 the meetings were held in January, since which time they have occurred in September.

"Placed in possession of this brief history of the society, furnished through the courtesy of Secretary Morris, I submit, gentlemen, that we have not been so strong numerically as we should have been, and we have not always been as active as a great State association could be, while that harmonious spirit essential to the accomplishment of all great undertakings has not always characterized our deliberations and actions, still the influence wielded and the work done by this society has been stupendous when considered in the light of our short history and the obstacles which have been contended with. The placing of the educational standard upon the high plane which it now occupies was the work of this society, and, while the enforcement of the letter of the law was a grievous wrong to certain unalienable rights of private corporations, the Regents of the University, when brought face to face with the fact that the standard was prohibitive of progress, so modified them as to leave the Empire State the foremost in the land in higher education, but placing its schools in a position where they could secure students of the higher order. As a consequence and as a part of this law, the Examining Board was established, and the high privilege is granted this society (and through it the legitimate members of the profession of the State) of naming the gentlemen who shall constitute that board, thus lifting the licensing of practitioners clear of all political influences, making the board professionally pure and above suspicion. The requirements for the licensing examination are of so high an order that only graduates of schools maintaining a standard equal to New York can present themselves. The harmless amendment recently allowed to pass the Legislature does not affect the integrity of our law, because the candidates which it is intended to shield must have the unanimous approval of the board.

"If nothing more than this had been accomplished by this society it has a thousand times justified its existence; but it has ever sought by its committees and by resolution to further professional and allied interests in a hundred ways, and it is really amazing how successful it has been. We are not risking our reputations as prophets when we say that with increased membership, stimulated interest and unity of purpose, great benefits

can be caused to flow to us and to the cause which we represent.

"I have in mind many fields that might be profitably cultivated, but I have consumed more of the valuable time of this meeting than I perhaps should have done. If I am fortunate enough to live throughout the coming year, and escape impeachment for incompetency, I shall be glad to absorb more of your time at the next meeting upon this important subject."

The reading of the minutes and the calling of the roll were on motion dispensed with, and the Secretary was called upon for his report, which was a splendid presentation of the condition of veterinary medicine of the country and the affairs of the Association.

Under the head of new and miscellaneous business, the proposed amendment to the constitution admitting to membership workers in the field of comparative medicine—confining its application to those who have contributed original papers, or have done experimental work in this branch of medicine—was taken up and passed unanimously.

Chairman Wm. Henry Kelly, of the Committee on Legislation, made a verbal report, giving the history of the efforts made during the last session of the legislature to pass bills to break the laws governing the practice of veterinary medicine in this State and those for the benefit of individuals. He also gave the alarm that more powerful and persistent attack would be made at the coming session, and he made a plea for more united and prompt action on the part of members of the profession of the State to kill such measures. He thought all veterinary surgeons should act in concert, whether members of the society or not; and advised that the committee send appeals to all veterinarians in the State when such an emergency arises. It was thought by some members that it would be a good plan to have the County Secretaries revived, and have the committee send directly to them, and let each Secretary communicate with the profession of his district. Upon motion, the President was directed to appoint a Secretary in every county of the State where there is a representative of this society.

A larger number of applications for membership were presented than at any previous meeting, no less than fifteen being reported favorably upon by the Board of Censors, all of whom were elected to membership. The following is the list of

NEW MEMBERS.

Chas. B. Potter, D. V. M. (N. Y. S. V. C., '99), Elmira. Vouchers, W. L. Williams and James Law.

J. W. Corrigan, D. V. M. (N. Y. S. V. C., 1900), Batavia. Vouchers, Wm. Henry Kelly and James Law.

W. J. Hallock, V. S. (O. V. C., '92), Auburn. Vouchers, A. W. Baker and James Law.

Thomas G. Sherwood, M. R. C. V. S. (London, 1883), New York City. Vouchers, Roscoe R. Bell and Samuel Atchison.

Chas. H. Jewell, D. V. M. (N. Y. S. V. C., 1900), Dunkirk. Vouchers, James Law and Roscoe R. Bell.

Albert B. Kelly, D. V. M. (N. Y. S. V. C., '98), Johnstown. Vouchers, Wm. Henry Kelly and F. L. Kilborne.

Thomas J. Herr, D. V. S. (A. V. C., '79), New York City. Vouchers, Roscoe R. Bell and C. D. Morris.

Pierre A. Fish, D. V. M. (N. Y. S. V. C., '99), Ithaca. Vouchers, James Law and F. L. Kilborne.

L. L. Bishop, V. S. (O. V. C., '94), Delavan. Vouchers, Romanza Perkins and E. M. Casey.

Garry T. Stone, D. V. M. (N. Y. S. V. C., 1900), Binghamton. Vouchers, W. L. Williams and James Law.

H. D. Stebbins, V. S. (O. V. C., '95), West Winfield. Vouchers, Wm. Henry Kelly and J. M. Currie.

Carl W. Gay, D. V. M. (N. Y. S. V. C., '99), Ithaca. Vouchers, James Law and Roscoe R. Bell.

C. F. Vorhis, V. S. (O. V. C., '95), Owego. Vouchers, James Law and Wm. Henry Kelly.

J. C. Stevens, V. S. (O. V. C., '94), Cortland. Vouchers, James Law and C. H. Jewell.

Alexander Findley, V. S. (O. V. C., '91), Camden. Vouchers, Wilson Huff and J. M. Currie.

THE LITERARY PROGRAMME.

The first contribution to this section of the programme was that of Dr. Claude D. Morris, who gave a didactic lecture upon the subject of "A Practical Shoe for the Utility Horse, as a Short Oral Clinic," wherein was depicted the benefits to be derived from a substance other than iron and calks in preventing slipping and lameness.

Next Dr. E. B. Ackerman, of Kings, brought forward the subject of "Rheumatism and Osteoporosis," the speaker claiming a direct connection between the two diseases, believing that in the condition of the subject the alkaline salts of the system were used up to neutralize the presence of lactic acid, and in consequence osteoporosis would follow from the diminished quantity of the normal alkaline salts of the blood. Much discussion was excited by the introduction of the subject, and,

while all were willing to admit a certain similarity of symptoms, they could not accept *in toto* the conclusions of the essayist.

"Swine Diseases in Clinton County," proved an exceptionally interesting paper, and the history of the outbreak, with very intelligent investigation, made all feel when the story was completed that they were better acquainted with the disease than ever before. Dr. J. A. McCrank, of Plattsburg, who prepared the paper, is to be congratulated upon this effort, and it is to be hoped that he will utilize his talents as a writer and observer of veterinary topics.

"Indigestion; Its Right and Wrong Treatment," was the subject of Dr. W. B. Switzer's contribution, and consisted largely in the report of an unusual case where profuse hæmorrhage followed the withdrawal of a probang, introduced for the purpose of removing gas from the stomach, being certain that no mechanical injury was inflicted by the instrument. This patient recovered, although there seemed no possibility of such a termination. This brought out an interesting discussion as to the use of probangs and rubber hose, Dr. Kelly detailing the facts in regard to his employment of the tube. It had been brought to his attention at the Omaha meeting, and he had employed it in many cases with gratifying results, only that his informant had inserted the hose through the nostril, and he had done so through the mouth. Prof. Law warned the members as to the danger of the latter method, as the patient would likely bite the hose in two and swallow the distal end. Others indulged in the discussion, and made a most interesting subject of it.

Dr. Romanza Perkins, of Warsaw, reported two cases of paralysis of the throat, giving the symptoms in detail. Scarcely a practitioner was present who could not point to many such cases occurring in his practice—all believing that they belonged to the class of meningitises, and many tracing their cause to improperly cured vegetation.

"Clinical and Histological Observations on a Case of so-called Hermaphroditism in a Horse" was the title of a paper the joint production of Profs. W. L. Williams and S. H. Gage, and proved of much interest to the convention.

Prof. Pierre A. Fish gave an entertaining discourse entitled "Observations on the Presence of Phosphates in the Urine of the Horse," exhibiting his methods of detecting them, and some improved apparatus used in the analysis.

ILLEGAL PRACTICING IN NEW YORK.

Vice-President Berns occupied the chair while President Bell brought forward the subject of the prosecution of those who are practicing veterinary medicine in New York State without a legal right to do so. The substance of his remarks were the same as those contained in an editorial in the September REVIEW, showing that on account of the inactivity of the profession in hunting down offenders, the latter were becoming emboldened and were getting to be so numerous as to be menacing. He thought the society should take steps to begin the systematic prosecution of such cases, believing that a few vigorous examples would cause most of them to fold up their tents and seek more congenial localities. The method of proceeding seemed to be the only question. A number of cases were reported of either convictions or the offenders had left the locality when the alarm was sounded. Considerable discussion upon all phases of the subject was indulged in, the result being that Dr. Williams moved that the Executive Committee should proceed to prosecute cases of flagrant violations in the manner which seemed to it the best, which was seconded and carried.

THE SURGICAL CLINICS.

The distinctive feature of the meeting at Ithaca, however, was the clinical demonstrations, the facilities for which were well-nigh perfect. The arrangements for the clinics were in charge of Prof. Williams, and it was the loudly expressed opinion of every one that they far surpassed anything of the kind ever held in this country. The arrangements moved with the precision of clock-work, and not a minute of time was lost. Whenever an hour, or even a half-hour could be spared from other parts of the programme, it would be announced that a subject was ready for operation, and away the members would fly to the clinic room. Even when the members and visitors were being entertained by the faculty on Wednesday night—after the stereopticon and microscopical sections had been completed, and before refreshments were served—the indefatigable Williams had a subject on the table, upon which, under complete chloroform anæsthesia, median neurectomy, tarsal tenotomy, the new double neurectomy for spavin, and plantar neurectomy were performed by various operators. The assertion will never again be made by those who attended this meeting that surgical clinics should be omitted from the programme of a veterinary association meeting, as everybody with whom

the REVIEW man talked were firmly convinced that they formed the best part of the entertainment—that they did more to instruct and make one feel that he had been well repaid for his visit; that he had learned something which he could only get by being present and seeing it with his own eyes; that the reason they have not always been as entertaining was because the arrangements were not properly perfected. Of course, it is not often that permanent facilities can be secured as at a college, but they can be made to very nearly approach them, and we commend to associations the adoption of such facilities as will make the clinics of the greatest importance, and they can take our word for it that the better the surgical clinics the more interest there will be to their members, ensuring large attendances and the production of much good. Below will be found a complete list of the subjects and the operators:

Median Neurectomy—E. B. Ackerman, of Brooklyn.

Sciatic Neurectomy—C. H. Jewell, of Dunkirk.

Casting a Horse—Charles Cowie, of Ogdensburg.

Castration by Torsion—Charles Cowie, of Ogdensburg.

Casting a Foal—C. L. Barnes and J. W. Corrigan.

Casting a Cow—R. S. Huidekoper.

Casting a Cow—C. B. Potter, of Elmira, and C. W. Gay, of Ithaca.

Confining Large Animals by Stocks and Operating Table—W. L. Williams and assistants.

Chloroform Anæsthesia (Horse)—G. T. Stone, of Binghamton, and C. L. Barnes.

Vaginal Ovariectomy (Mare)—G. T. Stone.

Vaginal Ovariectomy (Mare)—A. H. Ide, of Utica.

Vaginal Ovariectomy (Cow)—C. H. Jewell, of Dunkirk.

Vaginal Ovariectomy (Cow)—C. H. Jewell.

Caudal Myectomy for Gripping of Reins—J. W. Corrigan, of Batavia.

Caudal Myectomy for Gripping of Reins—Carl W. Fisher.

Aseptic Castration (Horse)—C. W. Gay.

Repulsion of Diseased Molar, Removal of External Alveolar Plate, Artificial Drainage of Maxillary Sinuses through the Nostril (Horse)—W. L. Williams.

Peroneal Tenotomy (Stringhalt Operation)—A. H. Ide.

Application of Plaster of Paris Bandage to Hock—J. W. Corrigan.

THE SOCIAL ENTERTAINMENT

consisted in a reception tendered to the guests by the faculty of

the veterinary college, and took place in the college building. A reception was held in the main hall by the ladies, and a pleasant half hour was passed in the formal presentation of the guests, after which Prof. Simon H. Gage gave some splendid views from the stereopticon and large extension lantern, illustrating the methods of studying histology and pathology. Up in the microscopical corridors there were awaiting the members innumerable instruments filled with instructive slides, but the point of most interest in this section was the excellent view to be had of the circulation of the blood in the gills of salamanders caught in Cayuga Lake; the tissues being so thin as to practically be no barrier to an unobstructed view. Then there was an apparatus indicating the beating of the heart of a turtle, another measuring the depth of the respirations of a man, and so on. When these entertainments were completed, all repaired to a frugal repast prepared for the guests on the lower floor, the affair being over in time to catch the trolleys for the hotels.

All in all, the meeting at Ithaca marked a new era in associational affairs in the Empire State, and all were so well pleased that they unanimously voted to accept Dean Law's invitation to hold the next meeting in the same place.

Among those present were the following:

Drs. Thos. J. Herr, New York City; C. J. Mulvey, Mooers; J. A. McCrank, Plattsburgh; Wilson Huff, Rome; Charles Cowie, Ogdensburgh; Roscoe R. Bell, Brooklyn; E. B. Ackerman, Brooklyn; Sam'l Atchison, Brooklyn; J. A. Bell, Watertown; W. H. Kelly, Albany; A. B. Kelly, Johnstown; W. B. Switzer, Oswego; E. M. Casey, Oxford; F. L. Kilborne, Kelloggsville; A. W. Baker, Oneonta; W. H. Salisbury, Clifton Springs; J. M. Taylor, Henrietta; Romanzo Perkins, Warsaw; L. L. Bishop, Delavan; W. J. Hallock, Auburn; A. H. Ide, Utica; George H. Berns, Brooklyn; C. H. Jewell, Dunkirk; Herbert Killips, Alexander; A. C. Hasslock, New York City; Alex. Findlay, Camden; G. C. Kesler, Holly; F. W. Hunt, Watkins; R. S. Huidekoper, Washington, D. C.; J. W. Darby, Fort Plain; Thos. G. Sherwood, New York City; J. C. Stevens, Cortland; J. L. Ronan, Corning; I. R. Webber, Rochester; J. M. Currie, Rome; A. J. Battin, Addison; H. Turner, Syracuse; F. W. Cook, Fayetteville; W. J. Johnston, Geneva; C. B. Potter, Elmira; Garry T. Stone, Binghamton; E. A. Bogart, Geneva; E. F. Vorhis, Oswego; H. D. Stebbins, West Winfield; J. H. Young, Belvidere; J. W. Corrigan, Batavia; James Law, P. A. Fish, S. H. Gage, V. A. Moore, C.

W. Fisher, J. A. Genung, Carl W. Gay, Ithaca, and C. D. Morris, Binghamton.

NOTES N. Y. S. V. M. S. MEETING.

Never again a meeting without a surgical clinic.

It was a practitioners' meeting throughout.

With such a meeting we predict that next year veterinarians from far and near will be falling over each other to get there.

Prof. Huidekoper as a bull-tamer was a success, but in a fast race with the bovine his avoirdupoise reacted sadly against him.

Weighty subjects of State medicine did not characterize the meeting; it was helpful to busy practitioners.

The active practitioners of the membership should illustrate easy methods of performing simple operations, as gained through ingenious experience.

"It was a grand meeting," was the verdict of every one as they left for home. Yes, probably as good as was ever held by any association in any country.

Secretary Morris counted 102 people in the hall during the reading of papers. What a contrast to the 25 or 30 of a few years ago.

The various sections of the State were well represented—the most conspicuous exception being Buffalo, and they were the losers. Her practical men cannot afford such a loss another year.

The spirit of surgery ran high, and the two instrument houses represented did a fine business. They were John Reynders & Co., and James F. McCune, of New York, both advertisers in the REVIEW.

The trolley ride "around the circle" gives a magnificent view of grand, wild and weird scenery—but the proximity of the road-bed to the edge of a bewildering precipice sends a romantic thrill through one's nervous system.

Dr. Cowie's casting harness caught the favorable opinion of all practical men. The doctor kindly laid them out so that any one who wished could take measurements and duplicate them if they wished. One veterinarian who did so kindly agreed to have his harness-maker take orders from those who wished a set, reducing thus the cost by making many.

When two such heavy weights as George H. Berns and R. S. Huidekoper occupy the same bed, something is liable to happen—and it did, about 2 A. M., the whole structure giving way, precipitating the occupants in a hopeless confusion of mat-

tresses, humanity and yells. It made no difference to the sleepers though; "they laid where they fell"; and Berns' rheumatism has been worse ever since.

New York City had very few representatives at Ithaca, which is in keeping with her usual history. No city in the world has such grand opportunities for profitable and populous associational work as Gotham; and none improve them so poorly. With more than 300 graduates within a radius of twenty miles, a quorum is about the limit, whatever the character of the meeting. Five members from Greater New York were present—Ackerman, Atchison, Bell, Berns, and Herr. Another year and it will be a miracle if there are not twenty-five or fifty on hand early.

A call reaches the REVIEW to agitate a three-days' meeting for next year; but we fear for the wisdom of the proposition. With the American Association demanding four days' attendance the week previous, exclusive of three or four days' traveling *to* and *fro*, it would make too great a demand upon the time of those who wish to attend both, and many would feel that one or the other of the two events should be omitted. No, the State Society held a most successful two-days' meeting, and it would be much better to repeat or surpass the performance next year than to indulge in any new experiments. We understand that more work can be done in three days than in two; but enough was accomplished to send all home well pleased with their two days' work, and that is just what was aimed at.

Prof. W. L. Williams' new text-book, entitled "Surgical Operations," arrived at Ithaca just before the convention met, and created a very favorable impression among those in attendance. A small supply had just been received from the printer, and they were seized upon so quickly that many were disappointed. Elsewhere will be found a scientific review of this little work, but we will simply state here that it is in the nature of a translation of the excellent treatise by Prof. Pfeiffer, of the Veterinary High School in Berlin, together with a number of essentially American operations, notably those of Williams (the technique of the majority of which has appeared in the REVIEW), McKillip and Merillat, together with a preface to the original work by Prof. Fröhner. The little volume is profusely illustrated and the technique is so plain that any one who is at all familiar with surgical procedures and anatomy, can understand the subject at a glance. All veterinarians en-

gaged in practice should have a copy. It was not published to make money, as the price, $1.25, will not permit of such a hope, and in order to place it before the veterinary public at a small cost, the author assumed all the responsibility of its publication. It can be had of W. R. Jenkins, New York, or Baillière, Tindall & Cox, London. Over fifty per cent. of those in attendance secured a copy, and the other fifty were kicking because the supply had given out.

MINNESOTA STATE VETERINARY MEDICAL ASSOCIATION.

The seventh semi-annual meeting was called to order by President S. H. Ward at 10 A. M., July 11, at the Holmes Hotel, Minneapolis.

The following members responded to roll-call: Drs. C. C. Lyford, S. D. Brimhal, J. G. Annand, A. A. Keyes, J. S. Butler, and M. J. Sexton, of Minneapolis; M. H. Reynolds, St. Anthony Park; L. Hay, Faribault; K. J. McKenzie, Northfield; S. H. Ward, St. Cloud; W. Amos, Owatonna; J. N. Gould, Worthington; A. F. Lees, Red Wing; H. C. Lyons, Hutchinson; H. C. Peters, Litchfield; W. A. Sproule, Waseca; T. Falconer, Glenwood.

The minutes of the previous meeting were read and accepted. The Treasurer's report was also read and accepted.

The following applicants were balloted upon and accepted as members of the association: Drs. J. G. Harris, J. W. Cook and J. McKay of Duluth; Drs. R. Lapoint and J. Murray of La Seur; Dr. D. M. McDonald of Brainerd; Dr. J. P. Foster of Bangor, S. D.

Communications from Drs. F. H. Farmer, M. S. Whitcomb, and B. Lambrechts were then read, each regretting his inability to attend.

The meeting then adjourned for dinner.

At 1.30 P. M. Dr. W. Amos gave his report on veterinary colleges, bringing out some important facts in connection with some of them. He also stated that two new colleges had been instituted since our last meeting.

Dr. C. C. Lyford reported for the Committee on Legislation and Empirics. He read a letter from the county attorney of Hennepin County stating that in his opinion the law regulating the practice of veterinary medicine and surgery in this State was valid and all right, but still did not advise carrying the McCulloch case to the Supreme Court.

At this juncture a Mr. Mercer, one of Minneapolis' most prominent attorneys, was called in to explain a few points in regard to the wording of the law. A lengthy discussion followed. On motion, it was decided to drop the case against Dr. McCulloch and not carry it to the Supreme Court, but instead that a new case be brought to fit under Sec. 8 of the law, in Ramsey County, and that a new committee be appointed to look after same. The committee appointed was Drs. R. Price, B. A. Pomeroy, and G. A. Dallamore.

Dr. S. D. Brimhal next reported for the Committee on Infectious Diseases, stating the number of cases of glanders reported since last meeting, number quarantined, number tested and number condemned. Also number of cases of tuberculosis reported, number tested and number condemned. The Doctor reported that two outbreaks of anthrax, malignant catarrh, had been reported from three districts, being from Steele, Beecker and Blue Earth counties. Blackleg seemed scattered through a good many different parts of the State.

Dr. Sexton reported for the Committee on Finances.

A communication was read from Dr. R. Price, who was then at St. Luke's Hospital in St. Paul, in which he gave his experience on the operating table while being operated upon for varicose veins.

Dr. Reynolds gave a lengthy report on recent advances in veterinary surgery, which was both interesting and instructive.*

Dr. S. D. Brimhal gave an extended report on recent veterinary literature, touching on bacteriology.

Dr. J. N. Gould reported recent veterinary literature bearing upon medicine.

The meeting then adjourned for supper, after which several autopsies were held on glandered horses at Carlson's Bros., on First Ave., North.

The balance of the evening was spent in the discussion of glanders and tuberculosis, and in the report of cases.

Thursday, July 12th, 9.00 A.M.—The members met at Dr. C. C. Lyford's Infirmary for the following clinics: Plantar neurectomy, Dr. L. Hay; plantar neurectomy, Dr. J. G. Annand; castration of a cryptorchid, Dr. J. N. Gould; plantar tenotomy, Dr. K. J. McKenzie; operation for capped hock, Dr. C. C. Lyford.

Thursday afternoon was spent at Lake Minnetonka, where the Twin City members had generously provided an outing for

* Printed elsewhere in this number.

the rest of the members and their wives. The first-class steam boat *The Victor*, having been previously chartered for the afternoon, we were given a delightful boat ride, supper being served on the boat, which was considered a nice way to bring the members of the veterinary profession and their families together, so that they might become better acquainted. To say that a pleasant afternoon was spent does not express it; each returned to his home feeling that his time had been pleasantly and profitably spent at this meeting.

K. J. McKENZIE, *Sec.-Treas.*

ILLINOIS VETERINARY MEDICAL AND SURGICAL ASSOCIATION.

The eleventh semi-annual meeting was called to order by President Dr. V. G. Hunt. Roll-call and reading of minutes of previous meeting.

President Hunt then delivered a masterly and touching address to those present, receiving much applause from the membership.

By invitation of President Hunt, Dr. Martin, of Kankakee, then gave the association a talk on spavin, defining the location and characteristics of this disease, its causes and the probable outcome, giving his treatment.

Dr. Travis next read a paper on "Laryngitis," giving a careful account of the causes, symptoms and results of this disease, giving his mode of treatment. Responded to by Dr. V. G. Hunt. Discussion among the members regarding the efficiency of tracheotomy in the treatment of laryngitis. Dr. S. H. Swain, Dr. Martin, and Dr. John Osborne also responded.

Dr. S. H. Swain was next on programme for a paper on "Omphalitis," giving carefully its characteristics, causes and symptoms, giving hygienic and medical treatment. Responded to by Dr. G. G. Baumgartner. Dr. V. G. Hunt gave a history of a case in his practice. Dr. N. P. Whitmore, of Gardner, responded.

Discussion on the efficiency of the present law regulating the practice of veterinary medicine and surgery in the State of Illinois, and the possibility of an amendment. This subject was very generally and warmly discussed by all present.

"Contagious Abortion" was next on programme, by Dr. John Osborne. Dr. Osborne having a severe cold, his paper was read to the society by the Secretary. This paper was re-

sponded to by Dr. Martin, of Kankakee, and Dr. V. G. Hunt, and discussed generally by the society.

Dr. V. G. Hunt followed next with an excellent paper on "Enteritis," giving graphically his treatment and the probable outcome.

Dr. S. H. Swain recited the history of a case of tetanus, giving his experience with the carbolic acid treatment.

On motion the meeting was then adjourned until 8 A. M., Aug. 9th.

Thursday, Aug. 9th.—The application for membership of Dr. Marsh, of Illiopolis, Dr. T. D. Skeen, of Garland, and Dr. N. P. Whitmore, of Gardner, were then read by the Secretary, and the applications were referred to the Committee on Membership, who examined into the proficiency and eligibility of the candidates.

The Committee on Membership reported favorably on the application of J. W. Marsh, of Illiopolis, and N. P. Whitmore, of Gardner. The application of T. D. Skeen, of Garland, Ill., was tabled until the next meeting for lack of evidence. On motion, the report of the committee was accepted. On motion, the Secretary cast the vote of the association. Dr. Hunt then introduced the new members to the association, which extended the right hand of fellowship to them.

On motion, the location, date, and place of meeting were fixed in Decatur, Ill., at the Brunswick Hotel, on Wednesday and Thursday, Jan. 10 and 11, 1901. Motion carried.

It was moved and seconded that the chair appoint a committee to draft a set of resolutions, censuring the Board of Live Stock Commissioners and Veterinary Examiners for the wholesale manner in which they have granted licenses to practice in the State of Illinois. Dr. S. H. Swain, Dr. N. P. Whitmer, and Dr. S. D. Brown were appointed on this committee.

The resolutions are as follows:

Mr. Chairman:

Your Committee on Resolutions of Censure of the Board of Live Stock Commissioners and the Board of Veterinary Examiners of the State of Illinois, beg to report the following:

WHEREAS, A law has been passed known as the Veterinary Practice Act, and,

WHEREAS, The law made it obligatory on the part of the Live Stock Commission to appoint a State Board of Veterinary Examiners to inquire into the qualifications of applicants for license to practice veterinary medicine and surgery; and,

WHEREAS, M. H. McKillip, James Robertson, and Chas. H. Merrick were appointed as such Board of Veterinary Examiners, and,

WHEREAS, The law clearly defines the duties of the Board of Veterinary Examiners as to the examination of applicants not entitled to practice by reason of not being in possession of a diploma, or of not having been in practice three consecutive years in the State of Illinois; and,

WHEREAS, The law requires that such applicants shall be examined in the following subjects, to wit: veterinary anatomy, surgery, practice of medicine, obstetrics, pathology, chemistry, veterinary diagnosis, materia medica, therapeutics, physiology, sanitary medicine, and meat and milk inspection, and such other branches as the Board may prescribe; and,

WHEREAS, It is well known by the members of this association, that the Veterinary Board have entirely ignored the law in making examinations, and have issued licenses to many persons of bad moral character, and who were entirely incompetent to practice, having neither practical nor literary knowledge of the science of veterinary medicine and surgery, thereby enabling such incompetent persons to point to the examination prescribed by law, and which they are supposed to have passed; and,

WHEREAS, Many such applicants of bad moral character, and who were known to be incompetent to practice, have been protested by men of good reputation and of known truth and veracity; and,

WHEREAS, Said Board have overridden said protests, and have knowingly violated the letter and spirit of the law, and have made the license fee the only qualification upon which to issue a license to practice; therefore,

Resolved, That we. the members of the Illinois Veterinary Medical and Surgical Association, do condemn, censure and deplore the conduct of said Board of Veterinary Examiners in the violation of their duties under the law, and further request their immediate removal from office.

S. H. SWAIN, V. S.
N. P. WHITMORE, M. D. C. } *Committee.*
S. D. BROWN.

The treatment of dysentery was then discussed by the members, and then the meeting was adjourned until January 10 and 11, 1901. W. A. SWAIN, *Secretary.*

WEST VIRGINIA VETERINARY MEDICAL ASSOCIATION.

Drs. Petrie, Ruhl and Hershey, consulting veterinarians to the State Board of Agriculture, met in Wheeling, and called a meeting to organize a State Veterinary Medical Association. All the veterinarians of the State were notified of the meeting, and all responded in person or by letter, and all are in full sympathy with the movement. But owing to business engagements, Dr. O. M. Bradley, Mammington; Dr. Wm. Stanley, Charlestown; Dr. Geo. W. Kinsey, Wheeling; Dr. T. E. Gore, Clarksburg, were unable to be present.

Dr. Wm. Petrie, Wheeling; Dr. F. P. Ruhl, Fairmont; Dr. J. C. Callander, Parkersburg; Dr. W. H. Kerr, Sistersville; Dr. L. N. Reefer, Wheeling, and Dr. S. E. Hershey, Keyser, were present and met in the Y. M. C. A. parlors, and organized with the following officers:

President—F. P. Ruhl, Fairmont.

Vice-President—J. C. Callander, Parkersburg.

Secretary-Treasurer—S. E. Hershey, Keyser.

Executive Committee—Drs. Petrie, Kerr, Bradley and Ruhl (*ex officio*).

The annual meetings will be held the first week in July, the Executive Committee selecting the place and hour.

S. E. HERSHEY, *Secretary.*

NEWS AND ITEMS.

DR. M. FRANCIS, of Texas, was prevented from attending the meeting of the A. V. M. A. by sickness.

DR. G. R. YOUNG, of Omaha, Neb., is now connected with the B. A. I., stationed at South Omaha.

DR. L. A. ROBINSON, of the B. A. I., Buffalo, N. Y., spent his annual vacation at his old home, Goodrich, Canada.

DR. A. F. MARTINS, of Boston, has been transferred to Buffalo for microscopic work.

DR. J. M. JOHNSON is now located at Kansas City, where he is purchasing horses for export to London, Eng.

DR. JNO. P. O'LEARY has recently been promoted from Assistant to an Inspector of the B. A. I., at Buffalo. This is a worthy testimonial to a deserving officer.

JOHN PENNIMAN, V. S., of Worcester, Mass., one of the oldest veterinarians in this country, father of Geo. P. Penniman, D. V. S., died in August last.

DR. CHARLES H. REED, of Westboro, Mass., has purchased and assumed charge of the practice of Dr. H. R. Stanhope, of Marlboro, Mass.

DR. B. P. WENDE and family, of Buffalo, N. Y., are spending a few weeks vacation in Cincinnati, O., and Kentucky. The doctor is one of the oldest members of the B. A. I. force, and may he enjoy his well-earned vacation.

DR. W. HORACE HOSKINS was summoned home hastily at the close of the Detroit meeting by the serious illness of his brother, which also prevented him from attending the New York State meeting.

A. W. LITTLEFIELD, V. S., Newport, Me., advises one grain of the mixture of calomel ʒi, extract belladonna gr. iv, blown into the eye twice daily in cases of periodic ophthalmia, claiming that it causes rapid subsidence of the inflammation.

DR. L. R. SATTLER, of Newark, N. J., was unable to attend the meeting of the Veterinary Medical Association of New Jersey at Atlantic City on the 13th inst. by reason of a painful accident to his face caused by an explosion of turpentine.

THE marriage of Dr. L. K. Green of the B. A. I., stationed at Detroit, to Miss Emma Becker, also of the B. A. I., of Buffalo, N. Y., was solemnized at the home of the bride, Sept. 19. After a tour of the Eastern cities, they will be at home in the City of the Straits.

DR. M. FRANCIS, of the Texas Agricultural College, whose researches and experiments with Texas fever were recently detailed in the REVIEW, writes us that "during the last twelve months we have inoculated over a thousand fine northern calves, and have had them all summer in the fever country. Our losses up to this time are about seven per cent."

MAURICE O'CONNELL, D. V. S., of Holyoke, Mass., graduate of the American Veterinary College, class of 1887, who has been a member of the Massachusetts Cattle Commission for a number of years, died at his home in August. He was a most genial gentleman, a good practitioner, and his early demise is much to be regretted. He has been in ill health for several years.

NEW YORK STATE BOARD OF VETERINARY EXAMINERS.—The new Board of Examiners met at Ithaca on Wednesday evening, Sept. 12, and organized by the selection of Dr. George H. Berns as President, Dr. C. D. Morris, Secretary, and Dr. F. L. Kilborne, Editor. The subjects were grouped and apportioned as follows: Anatomy and surgery, Dr. George H. Berns; chemistry, materia medica and therapeutics, Dr. Charles Cowie; physiology and hygiene, Dr. C. D. Morris; theory, diagnosis and practice, Dr. F. L. Kilborne; obstetrics and embryology, Dr. John A. Bell.

COLEMAN NOCKOLDS, M. D., V. S., recently of Grand Rapids, Mich., who took the last examination for Army veterinary surgeons, and received appointment as first-class veterinarian, writes the REVIEW from the Presidio, Cal., under date of Aug. 31, as follows: "I sail from San Francisco on board the *Feredica* for Manila on or about Monday, Sept. 4th. I am going over in charge of the horses belonging to batteries C and

M of 7 th the Light Artillery. There will also be about 100 horses belonging to the Quartermaster's Department on board. Upon arriving at Manila I will join my regiment (the 1st Cavalry). If during my stay abroad I can be of any service to you by forwarding items, articles, etc., will be pleased to do so."

HAUPTNER RECEIVES PARIS PRIZE. — The International Jury of the Paris Exhibition, in the class of "Medicine and Surgery" of the German department, have granted the sole Grand Prix of this class to the veterinary instruments manufactured by Messrs. H. Hauptner's instrument works at Berlin. The granting of this prize will be of great interest to veterinary experts, especially if it is considered that the international jury of this class consisted of 12 physicians, 1 dentist, 1 veterinary surgeon, and one manufacturer, and that Hauptner's veterinary instruments were standing in competition with the surgical instruments manufactured by the most renowned firms. Besides the above, Messrs. Hauptner were granted the golden medal in the class of "agriculture" for apparatuses for the breeding and nursing of animals.

THE IOWA AGRICULTURAL COLLEGE.—We regret having been led into the error of announcing in last month's number the acceptance by Dr. M. H. Reynolds, of St. Anthony Park, Minn., of the deanship of this well-known institution. The mistake was not one of our making, however, as the information came to us from two sources, both of which were considered reliable. The facts in the case are that negotiations had proceeded so far as to have resulted in the election of Dr. Reynolds by the Board of Trustees of the College, but when the details of consummation were reached a hitch occurred which culminated in the subject being side-tracked. The college has, however, we are glad to learn, materially strengthened its working faculty by the election of two veterinarians, and there is every evidence that the school is destined to be at the very top of the advanced veterinary schools of the continent. John H. McNeall (University of Pennsylvania, class of '98) has been elected to the position of Assistant Professor of Anatomy and Surgery. He has been on the staff of the Bureau of Animal Industry since his graduation, located at Boston and Buffalo, but more recently he was assigned to field duty in the investigation of sheep scab, with headquarters at Shoshone, Idaho. The other excellent appointment is that of Dr. Louis A. Klein (University of Pennsylvania, class of '97), who assumes the position of Assistant Professor of Practice and Meat Inspection. Dr. Klein was en-

gaged in private practice for a year, but relinquished it for the more congenial duties of slaughter-house inspection for the Bureau, being located at Chicago and Philadelphia. The vacant deanship has been filled by the election of the President of the College, Dr. W. M. Beardshear, A. M., LL. D., to the position of acting dean. Dr. John J. Repp, who has been doing excellent work since his connection with the Ames College, will fill the active duties of the deanship, and there is no doubt whatever but that with the infusion of this new and ambitious blood into the old school we are to have a live institution and one which is to take high rank.

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REVIEWS FOR EXCHANGE.

I have these duplicates: Vol. XVIII, July (1894); Vol. XV, April and May (1891). I need the following: Vol. XIX, September and October (1895); Vol. XVII, January (1894). Would like to exchange with some one having duplicates, etc. HUGH THOMSON, V. S., Sharbona, Ill.

NOVEMBER, 1894, REVIEW WANTED.

To complete my file I would like to secure No. 8, Vol. XVIII of the AMERICAN VETERINARY REVIEW. Any one having an extra copy of that number please address H. D. STEBBINS, V.S., West Winfield, N. Y.

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